

# Air quality - revision of EU rules: Targeted survey questionnaire (Part 1 of 2)

Fields marked with \* are mandatory.

## Air quality - revision of EU rules Targeted survey questionnaire – Part 1 of 2

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### Background

Clean air is essential for our health and that of the environment. The [Ambient Air Quality \(AAQ\) Directives](#) set EU air quality standards to avoid the build-up of excessive air pollutant concentrations. The AAQ Directives also define common methods to monitor, assess and inform regarding ambient air quality in the European Union. Furthermore, the AAQ Directives require action, when EU air quality standards are exceeded, in order to avoid, prevent or reduce harmful effects on human health and the environment as a whole.

As part of the [European Green Deal](#), the EU is revising these EU air quality standards, to align them more closely with the recommendations of the World Health Organization (see an overview of the EU air quality standards [here](#)). It also aims to improve the overall EU legislation for clean air, including revising provisions on penalties in case of exceedances, requirements for public information, as well as propose means to strengthen air quality monitoring, modelling and plans to help local authorities achieve cleaner air.

### The targeted survey in the context of the Impact Assessment

The Commission has launched an [impact assessment](#) to support the AAQ Directives revision. In line with the Commission's [Better Regulation](#) agenda, a range of stakeholder engagement activities are being conducted to help inform the impact assessment, consisting of an open public consultation, stakeholder workshops and targeted engagement (survey and interviews). This targeted stakeholder questionnaire intends to gather views for consideration in the impact assessment, especially when designing potential (regulatory and non-regulatory) measures to reduce air pollution, strengthen air quality monitoring, modelling and plans, and reduce the related impacts on environment and society.

### Why are we consulting you?

To complement the open public consultation, which aimed to widely canvass opinions across all stakeholder groups, via this targeted questionnaire **we are seeking in-depth views of organizations with an interest in or working with EU rules on air quality**. Therefore, this questionnaire is being specifically disseminated to targeted stakeholders including competent authorities, private sector organizations, academics and civil society organizations to seek their views on how specific provisions in the current air quality rules could be revised.

## Structure of the survey

Please note that the targeted stakeholder survey has been split into two separate parts. **Part 1 (this survey) only contains questions on Policy Area 1** (Closer alignment of the EU air quality standards with the latest recommendations of the World Health Organization). **Part 2 (forthcoming) will address questions on Policy Areas 2 and 3** (Improving the current air quality legislative framework, including provisions on penalties and public information; and Strengthening of air quality monitoring, modelling and plans). Part 2 will be published shortly (January 2022) and stakeholders will be directly informed regarding its publication.

Part 1 (this survey) is divided into two sections:

- Section 1: About you (respondent identification);
- Section 2: Questions on Policy Area 1 (EU air quality standards).

We estimate that replying to all questions would take about 30 minutes. Please note that not all questions have to be answered. At the end of the questionnaire, there is also an option to upload additional documents, may you deem it relevant.

Thank you for your cooperation. Your input is extremely valuable in supporting the revision of the Ambient Air Quality Directives.

## Section 1: About you – Respondent identification

\* a) In what capacity are you completing this questionnaire?

- Academic/research institution
- Business association
- Company/business organisation
- Environmental organisation
- Non-governmental organisation (NGO)
- Trade Union
- National public authority
- Regional public authority
- Local public authority
- EU institution or body
- International institution or body
- Other

\* b) First name

*100 character(s) maximum*

Panagiotis

\* c) Surname

*100 character(s) maximum*

Chaslaridis

\* d) Email address (this will not be published)

panagiotis.chaslaridis@efanet.org

e) Organization name

*100 character(s) maximum*

European Federation of Allergy and Airways Diseases Patients' Associations (EFA)

f) Organization size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

g) Organization scope

- International
- National
- Regional
- Local

h) Transparency Register number

*255 character(s) maximum*

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

28473847513-94

\* i) Country of origin

Please add your country of origin, or that of your organisation if you are responding on behalf of your organisation

BE - Belgium

\* j) Please indicate the sector(s) you are active in

*at most 3 choice(s)*

- air quality management
- air quality monitoring
- agriculture / food
- biodiversity and/or environment
- energy
- government
- health care
- investment and finance
- manufacturing
- public health
- raw materials extraction / primary processing
- scientific research

- transport
- none of the above sectors
- other
- I do not know, or I do not want to answer

\* k) Publication privacy settings

The Commission may publish the responses to this consultation. You can choose whether you would like your details to be made public or to remain anonymous by clicking the relevant box.

- Anonymous: Only your organisation name, size and scope; country of origin; type of respondent; transparency register number and contribution will be published. All other personal details (name of individual responding) will not be published.
- Public: Your personal details (your name, organisation name and size, transparency register number, country of origin) will be published with your contribution.

I agree with the [personal data protection provisions](#)

\* l) Would you be interested in participating in follow-up consultation activities in relation to 'Air quality - revision of EU rules' (i.e. interviews and/or focus groups)?

- Yes
- No

## Section 2: Policy area 1 - Closer alignment of the EU air quality standards with the latest recommendations of the World Health Organization (WHO)

There are ongoing [health challenges](#) caused by air pollution. A shortcoming of the current legislation is that the existing [EU air quality standards](#) are not fully on par with the current health guidelines based on the most up-to-date scientific research. Policy options will be developed and assessed with the aim to attain closer alignment of EU air quality standards with the most up-to-date scientific understanding of health impacts associated with air pollution. This includes in particular the consideration of recently published updated WHO recommendations ([WHO Air Quality Guidelines](#)) as well as addressing health outcome shortcomings identified in the scientific literature elsewhere.

The questions under Policy area 1 cover:

- How to address air pollutants covered by the latest WHO Air Quality Guidelines? (*i.e. PM2.5, PM10, O3, NO2, SO2, CO*)
- How to address air pollutants covered by earlier editions of the WHO Air Quality Guidelines only? (*i.e. arsenic, cadmium, nickel, lead, benzene, polycyclic aromatic hydrocarbons*)
- How to address air pollutants for which there are no WHO guideline levels or reference levels? (*i.e. black carbon, ultrafine particles, ammonia, others*)
- What type of EU air quality standards should apply for different pollutants? (*i.e. limit values, target values, long-term objective, average exposure levels, alert thresholds, other*)
- What are barriers to, and wider impacts of, setting revised EU air quality standards? (*i.e. implementation barriers, societal cost, societal benefits*)

**1. In your opinion, would it be feasible to meet the most recent WHO recommendations regarding air pollutants across the European Union – or would you see any critical barrier(s) that would prevent their achievement?**

Please indicate in the table what degree of additional effort you think it would take to reach the levels (guideline or reference levels) recommended by WHO across the EU - and elaborate what substantial barriers you would see to reaching these recommended levels in the text box below.

|   | Not feasible, for the foreseeable future | Feasible, but only with <u>significant</u> additional effort | Feasible, with <u>some</u> additional effort | Feasible, <u>without</u> additional effort | No opinion            |
|---|--|--|--|--|-----------------------|
| PM2.5 (1 year averaging period; WHO recommendation of <a href="#">5 µg/m3</a> )     | <input type="radio"/>                    | <input type="radio"/>  | <input checked="" type="radio"/>             | <input type="radio"/>                      | <input type="radio"/> |
| PM2.5 (24 hours averaging period; WHO recommendation of <a href="#">15 µg/m3</a> )  | <input type="radio"/>                    | <input type="radio"/>  | <input checked="" type="radio"/>             | <input type="radio"/>                      | <input type="radio"/> |
| PM10 (1 year averaging period; WHO recommendation of <a href="#">15 µg/m3</a> )     | <input type="radio"/>                    | <input type="radio"/>  | <input checked="" type="radio"/>             | <input type="radio"/>                      | <input type="radio"/> |
| PM10 (24 hours averaging period; WHO recommendation of <a href="#">45 µg/m3</a> )   | <input type="radio"/>                    | <input type="radio"/>  | <input type="radio"/>                        | <input checked="" type="radio"/>           | <input type="radio"/> |
| Ozone (peak season; WHO recommendation of <a href="#">60 µg/m3</a> )                | <input type="radio"/>                    | <input type="radio"/>  | <input checked="" type="radio"/>             | <input type="radio"/>                      | <input type="radio"/> |
| Ozone (8 hours averaging period; WHO recommendation of <a href="#">100 µg/m3</a> )  | <input type="radio"/>                    | <input type="radio"/>  | <input type="radio"/>                        | <input checked="" type="radio"/>           | <input type="radio"/> |
| SO2 (24 hours averaging period; WHO recommendation of <a href="#">40 µg/m3</a> )    | <input type="radio"/>                    | <input type="radio"/>  | <input checked="" type="radio"/>             | <input type="radio"/>                      | <input type="radio"/> |
| SO2 (10 minutes averaging period; WHO recommendation of <a href="#">500 µg/m3</a> ) | <input type="radio"/>                    | <input type="radio"/>  | <input checked="" type="radio"/>             | <input type="radio"/>                      | <input type="radio"/> |
|   |  |  |  |  |                       |

|   |                       |                       |                                  |                                  |                       |
|---|-----------------------|-----------------------|----------------------------------|----------------------------------|-----------------------|
| NO2 (1 year averaging period; WHO recommendation of <a href="#">10 µg/m3</a> )      | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| NO2 (24 hours averaging period; WHO recommendation of <a href="#">25 µg/m3</a> )    | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| NO2 (1 hour averaging period; WHO recommendation of <a href="#">200 µg/m3</a> )     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| CO (24 hours averaging period; WHO recommendation of <a href="#">4 µg/m3</a> )      | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| CO (8 hours averaging period; WHO recommendation of <a href="#">10 µg/m3</a> )      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Lead (1 year averaging period; WHO recommendation of <a href="#">0.5 µg/m3</a> )    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Benzene (1 year averaging period; WHO recommendation of <a href="#">1.7 µg/m3</a> ) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Arsenic (1 year averaging period; WHO recommendation of <a href="#">6.6 µg/m3</a> ) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Cadmium (1 year averaging period; WHO recommendation of <a href="#">5 ng/m3</a> )   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Nickel (1 year averaging period; WHO recommendation of <a href="#">25 ng/m3</a> )   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| BaP (1 year averaging period; WHO recommendation of <a href="#">0.12 ng/m3</a> )    | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |

**Please elaborate your answer for each air pollutant where you have indicated either that it is not feasible to meet WHO recommendations at all, or where you see the need for significant additional efforts, to explain the barriers you see (i.e. what is the barrier, to what extent will this prevent achievement, are there any options to mitigate this challenge?):**

Today, scientific evidence has demonstrated beyond any doubt that air pollution takes a huge toll human health. Exposure to polluted air is associated with significant health burden, including mortality (more than 400,000 premature deaths in the EU per year), disease exacerbation, increased hospitalisations, economic and social costs and an unquantifiable human distress. Vulnerable population such as respiratory patients, children and the elderly are particularly at risk, as they are more likely to experience the adverse effects of air pollution in the short and long term.

In this light, EFA supports urgent action towards the full alignment of the EU air quality standards with the most up-to-date worldwide scientific evidence: the 2021 WHO Air Quality Guidelines. The WHO Guideline levels recommended must be taken as governing reference points, as they represent the only health-related recommendations on the pollution levels that people should be exposed to.

Chronic respiratory patients are one of the most affected communities by air pollution, and as representatives of patients we find that this question does not focus on the real issue. It is not about whether we can meet the WHO recommendations, but how soon we can reach this goal; it is not whether it is feasible, but how urgent it is to act and the scale of ambition; and, finally, it is not about the barriers, but how unsustainable it is to continue with air pollution levels that put our health and the environment under strain.

EFA does not underestimate the technical/legislative effort required, as well as the time needed for adaptation, but we firmly believe that an ambitious effort for cleaner air will pay off in terms of benefits in human health and wellbeing, while saving resources and efforts within national health systems.

## Section 2.1: How to address air pollutants covered by the latest WHO Air Quality Guidelines? (i.e. PM2.5, PM10, O3, NO2, SO2, CO)

### \* 2. I wish to reply to specific questions on 'How to address air pollutants covered by the latest WHO Air Quality Guidelines?'

- Yes  
 No

The WHO set out guideline values – via [Air Quality Guidelines](#) – for a range of air pollutants [in 2000](#) and [in 2005](#) to advise on how to avoid the adverse health implications linked to air pollution. Some of these guideline values were recently updated in [September 2021](#) – notably for PM2.5, PM10, O3, SO2, NO2, and CO. In addition to guideline levels, the WHO has also outlined a series of less stringent interim targets for these air pollutants, which if met would already lead to a significant decline in adverse health impacts of air pollution.

| Pollutant   | Averaging period       | EU Ambient Air Quality Directives*** |                                 | WHO 2021 guidelines levels* | WHO 2021 interim targets* |
|---|------------------------|--------------------------------------|---------------------------------|-----------------------------|---------------------------|
|   |                        | Concentration                        | Permitted exceedances each year | Concentration               | Concentration             |
| Fine particulate matter (PM <sub>2.5</sub> )<br>[in µg/m <sup>3</sup> ] | 1 year                 | 25                                   | -                               | 5                           | 35 / 25 / 15 / 10         |
|   | 24 hours               | -                                    | -                               | 15                          | 75 / 50 / 37.5 / 25       |
| Particulate matter (PM <sub>10</sub> )<br>[in µg/m <sup>3</sup> ]       | 1 year                 | 40                                   | -                               | 15                          | 70 / 50 / 30 / 20         |
|   | 24 hours               | 50                                   | 35 days                         | 45                          | 150 / 100 / 75 / 50       |
| Ozone (O <sub>3</sub> )<br>[in µg/m <sup>3</sup> ]                      | Peak season            | -                                    | -                               | 60                          | 100 / 70                  |
|   | 8 hour                 | 120 (target value)                   | 25 days avg. over 3 years       | 100                         | 160 / 120                 |
| Sulphur dioxide (SO <sub>2</sub> )<br>[in µg/m <sup>3</sup> ]           | 24 hours               | 125                                  | 3 days                          | 40                          | 125 / 50                  |
|   | 1 hour                 | 350                                  | 24 hours                        | -                           | -                         |
|   | 10 minute              | -                                    | -                               | 500                         | -                         |
| Nitrogen dioxide (NO <sub>2</sub> )<br>[in µg/m <sup>3</sup> ]          | 1 year                 | 40                                   | -                               | 10                          | 40 / 30 / 20              |
|   | 24 hour                | -                                    | -                               | 25                          | 120 / 50                  |
|   | 1 hour                 | 200                                  | 18 hours                        | 200                         | -                         |
| Carbon monoxide (CO)<br>[in mg/m <sup>3</sup> ]                         | 24 hour                | -                                    | -                               | 4                           | 7                         |
|   | Max. daily 8 hour mean | 10                                   | -                               | 10                          | -                         |

Notes: \* WHO (2021) WHO global air quality guidelines (note this does not include all WHO guidelines for all air pollutants or averaging periods); \*\*\* Given as 'limit values' except where specified otherwise below

### 3. Do you (still) see a need for EU air quality standards to regulate:

(a) ANNUAL / SEASONAL average concentrations for the following air pollutants?

|  | Yes                              | No                    | No opinion                       |
|--|----------------------------------|-----------------------|----------------------------------|
| Fine particulate matter (PM <sub>2.5</sub> ) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            |
| Particulate matter (PM <sub>10</sub> )       | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            |
| Ozone (O <sub>3</sub> )                      | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            |
| Sulphur dioxide (SO <sub>2</sub> )           | <input type="radio"/>            | <input type="radio"/> | <input checked="" type="radio"/> |
| Nitrogen dioxide (NO <sub>2</sub> )          | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            |
| Carbon monoxide (CO)                         | <input type="radio"/>            | <input type="radio"/> | <input checked="" type="radio"/> |

(b) POLLUTION PEAK concentrations (daily or hourly air quality standards) for the following air pollutants?

|  | Yes                              | No                    | No opinion            |
|--|----------------------------------|-----------------------|-----------------------|
| Fine particulate matter (PM <sub>2.5</sub> ) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Particulate matter (PM <sub>10</sub> )       | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ozone (O <sub>3</sub> )                      | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sulphur dioxide (SO <sub>2</sub> )           | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nitrogen dioxide (NO <sub>2</sub> )          | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Carbon monoxide (CO)                         | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |

### 4. Please indicate air quality standards which you believe would be appropriate for the EU in the SHORT TO MEDIUM TERM?



(a) What timeframe do you consider to be 'SHORT TO MEDIUM TERM'?

- 2025
- 2030
- 2035
- 2040
- 2045
- 2050
- Other

(b) Please indicate what you consider an appropriate standard in the SHORT TO MEDIUM TERM, (note: WHO guideline exposure levels are depicted in **bold** font, existing EU air quality standards are shown in blue text) for:

i. Fine particulate matter (PM2.5) [in  $\mu\text{g}/\text{m}^3$ ] – 1 year averaging period

- No standard
- No opinion
- 25
- 15
- 10
- 5
- <5

ii. Fine particulate matter (PM2.5) [in  $\mu\text{g}/\text{m}^3$ ] – 24 hour averaging period

- No standard
- No opinion
- 50
- 37.5
- 25
- 15
- <15

iii. Particulate matter (PM10) [in  $\mu\text{g}/\text{m}^3$ ] – 1 year averaging period

- No standard
- No opinion
- 40
- 30
- 20
- 15
- <15

iv. Particulate matter (PM10) [in  $\mu\text{g}/\text{m}^3$ ] – 24 hour averaging period

- No standard
- No opinion
- 50
- 45
- <45

v. Ozone (O<sub>3</sub>) [in µg/m<sup>3</sup>] – peak season

- No standard
- No opinion
- 100
- 70
- 60
- <60

vi. Ozone (O<sub>3</sub>) [in µg/m<sup>3</sup>] – 8 hour

- No standard
- No opinion
- 120
- 100
- <100

vii. Sulphur dioxide (SO<sub>2</sub>) [in µg/m<sup>3</sup>] - 24 hour averaging period

- No standard
- No opinion
- 125
- 50
- 40
- <40

viii. Sulphur dioxide (SO<sub>2</sub>) [in µg/m<sup>3</sup>] - 1 hour averaging period

- No standard
- No opinion
- 350
- <350

ix. Sulphur dioxide (SO<sub>2</sub>) [in µg/m<sup>3</sup>] – 10 minute averaging period

- No standard
- No opinion
- 500
- <500

x. Nitrogen dioxide (NO<sub>2</sub>) [in µg/m<sup>3</sup>] – 1 year averaging period

- No standard
- No opinion
- 40
- 30
- 20
- 10
- <10

xi. Nitrogen dioxide (NO<sub>2</sub>) [in µg/m<sup>3</sup>] - 24 hour averaging period

- No standard
- No opinion
- 120
- 50
- 25**
- <25

xii. Nitrogen dioxide (NO<sub>2</sub>) [in µg/m<sup>3</sup>] - 1 hour averaging period

- No standard
- No opinion
- 200 (200)**
- 120
- 50
- <50

xiii. Carbon monoxide (CO) [in mg/m<sup>3</sup>] - 24 hour averaging period

- No standard
- No opinion
- 10
- 7
- 4**
- <4

xiv. Carbon monoxide (CO) [in mg/m<sup>3</sup>] - Max. daily 8 hour mean

- No standard
- No opinion
- 10 (10)**
- 7
- 4
- <4

xv. For any of the above pollutants, do you think that values other than those above should be considered?

The EFA patient community calls on the EU to fully align the EU air quality standards with the 2021 recommendations of the WHO Air Quality Guidelines, to be achieved as soon as possible and certainly by no later than 2030. We are confident that the 2030 milestone takes into account the realities of the legislative procedure and the necessary transition periods, on the one hand, and the urgency to act, on the other. Further amendments in line of new scientific evidence would be very much welcome later on, but at this point the alignment with the WHO Air Quality Guidelines cannot be postponed any longer.

Full alignment implies the introduction of an EU standard in pollutant metrics where the EU does not have one already e.g. PM<sub>2,5</sub> 24h averaging period, O<sub>3</sub> peak season, SO<sub>2</sub> 10mins averaging period, NO<sub>2</sub> 24h averaging period, CO 24h averaging period. These additional metrics can strengthen the existing framework and provide for better monitoring for these pollutants.

In pollutant metrics where WHO limit values do not exist (e.g. SO<sub>2</sub> in 1h averaging period), EFA urges the Commission to #ShowLeadership and protect the population with solid limits backed up by scientific consensus not yet included in the WHO guidelines.

Finally, as scientific knowledge typically advances in a faster pace than legislation, we urge the Commission to legislate towards an adjustment mechanism that automatically adapts legislation to the latest scientific evidence.

(c) Please indicate where your proposed standard should apply in the SHORT TO MEDIUM TERM:

*[Note that 'all territory' refers to a standard that would need to be met throughout the territory or everywhere, 'background only' would need to be met only at urban background locations and exclude pollution hotspots, and 'at selected locations only' would need to be met only at locations specifically designated as specific air quality protection areas to protect sensitive populations.]*

|   | All territory                    | Background only       | At selected locations only |
|---|----------------------------------|-----------------------|----------------------------|
| Fine particulate matter (PM <sub>2.5</sub> ) (1 year averaging period)  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Fine particulate matter (PM <sub>2.5</sub> ) (24 hour averaging period) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Particulate matter (PM <sub>10</sub> ) (1 year averaging period)        | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Particulate matter (PM <sub>10</sub> ) (24 hour averaging period)       | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Ozone (peak season)   | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Ozone (8 hour averaging period)   | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Sulphur dioxide (SO <sub>2</sub> ) (24 hour averaging period)           | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Sulphur dioxide (SO <sub>2</sub> ) (1 hour averaging period)            | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Sulphur dioxide (SO <sub>2</sub> ) (10 minute averaging period)         | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Nitrogen dioxide (NO <sub>2</sub> ) (1 year averaging period)           | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Nitrogen dioxide (NO <sub>2</sub> ) (24 hour averaging period)          | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Nitrogen dioxide (NO <sub>2</sub> ) (1 hour averaging period)           | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Carbon monoxide (CO) (24 hour averaging period)                         | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Carbon monoxide (CO) (8 hour averaging period)                          | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |

Please also see Q12 below to indicate the type of EU air quality standard you consider most appropriate.

**5. Please indicate air quality standards which you believe would be appropriate for the EU in the LONGER TERM?**

(a) What timeframe do you consider to be 'LONGER TERM'?

- 2025
- 2030
- 2035
- 2040
- 2045
- 2050
- Other

(b) Please indicate what you consider an appropriate standard in the LONGER TERM, (*note: WHO guideline exposure levels are depicted in **bold** font, existing EU air quality standards are shown in blue text*) for:

i. Fine particulate matter (PM2.5) [in  $\mu\text{g}/\text{m}^3$ ] – 1 year averaging period

- No standard
- No opinion
- 25
- 15
- 10
- 5
- <5

ii. Fine particulate matter (PM2.5) [in  $\mu\text{g}/\text{m}^3$ ] – 24 hour averaging period

- No standard
- No opinion
- 50
- 37.5
- 25
- 15
- <15

iii. Particulate matter (PM10) [in  $\mu\text{g}/\text{m}^3$ ] – 1 year averaging period

- No standard
- No opinion
- 40
- 30
- 20
- 15
- <15

iv. Particulate matter (PM10) [in  $\mu\text{g}/\text{m}^3$ ] – 24 hour averaging period

- No standard

- No opinion
- 50
- 45
- <45

v. Ozone (O3) [in  $\mu\text{g}/\text{m}^3$ ] – peak season

- No standard
- No opinion
- 100
- 70
- 60
- <60

vi. Ozone (O3) [in  $\mu\text{g}/\text{m}^3$ ] – 8 hour

- No standard
- No opinion
- 120
- 100
- <100

vii. Sulphur dioxide (SO2) [in  $\mu\text{g}/\text{m}^3$ ] - 24 hour averaging period

- No standard
- No opinion
- 125
- 50
- 40
- <40

viii. Sulphur dioxide (SO2) [in  $\mu\text{g}/\text{m}^3$ ] - 1 hour averaging period

- No standard
- No opinion
- 350
- <350

ix. Sulphur dioxide (SO2) [in  $\mu\text{g}/\text{m}^3$ ] - 10 minute averaging period

- No standard
- No opinion
- 500
- <350

x. Nitrogen dioxide (NO2) [in  $\mu\text{g}/\text{m}^3$ ] – 1 year averaging period

- No standard
- No opinion
- 40
- 30
-

20

- 10
- <10

xi. Nitrogen dioxide (NO<sub>2</sub>) [in µg/m<sup>3</sup>] - 24 hour averaging period

- No Standard
- No Opinion
- 120
- 50
- 25
- <25

xii. Nitrogen dioxide (NO<sub>2</sub>) [in µg/m<sup>3</sup>] - 1 hour averaging period

- No Standard
- No Opinion
- 200 (200)
- 120
- 50
- <50

xiii. Carbon monoxide (CO) [in mg/m<sup>3</sup>] - 24 hour averaging period

- No Standard
- No opinion
- 10
- 7
- 4
- <4

xiv. Carbon monoxide (CO) [in mg/m<sup>3</sup>] - Max. daily 8 hour mean

- No standard
- No opinion
- 10 (10)
- 7
- 4
- <4

xv. For any of the above pollutants, do you think that values other than those above should be considered?

EFA believes that the EU standards must enter a continuous process of ever-growing ambition, reflected by ever lower limit values as scientific evidence emerges. Such an ambition is in line with the EU's formal commitment to become climate-neutral by 2050, as most of the pollutants within the scope of the Air Quality Directives, such as particulate matter and ozone, also contribute to climate change.

(c) Please indicate where your proposed standard should apply in the LONGER TERM:

[Note that **'all territory'** refers to a standard that would need to be met throughout the territory or everywhere, **'background only'** would need to be met only at urban background locations and exclude pollution hotspots, and **'at selected locations only'** would need to be met only at locations specifically designated as specific air quality protection areas to protect sensitive populations.]

|  | All territory                    | Background only       | At selected locations only |
|--|----------------------------------|-----------------------|----------------------------|
| Fine particulate matter (PM2.5) (1 year averaging period)  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Fine particulate matter (PM2.5) (24 hour averaging period) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Particulate matter (PM10) (1 year averaging period)        | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Particulate matter (PM10) (24 hour averaging period)       | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Ozone (peak season)  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Ozone (8 hour averaging period)                            | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Sulphur dioxide (SO2) (24 hour averaging period)           | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Sulphur dioxide (SO2) (1 hour averaging period)            | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Sulphur dioxide (SO2) (10 minute averaging period)         | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Nitrogen dioxide (NO2) (1 year averaging period)           | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Nitrogen dioxide (NO2) (24 hour averaging period)          | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Nitrogen dioxide (NO2) (1 hour averaging period)           | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Carbon monoxide (CO) (24 hour averaging period)            | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Carbon monoxide (CO) (8 hour averaging period)             | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |

Please also see Q13 below to indicate the type of EU air quality standard you consider most appropriate.

**Section 2.2: How to address air pollutants covered by earlier editions of the WHO Air Quality Guidelines only? (i.e. arsenic, cadmium, nickel, lead, benzene, polycyclic aromatic hydrocarbons)**

**\* 6. I wish to reply to specific questions on 'How to address air pollutants covered by earlier editions of the WHO Air Quality Guidelines only?'**

- Yes
- No



For several air pollutant objective averaging periods, EU air quality standards have been defined and WHO reference values exist, but were not updated by the WHO in 2021: Lead; Benzene; Arsenic; Cadmium; Nickel and PAH (all averaged over 1 year). In some cases, the current EU air quality standard is consistent with the WHO reference values from 2005, in others the levels are set above the WHO reference values.

| Pollutant   | Averaging period | EU Ambient Air Quality Directives*** |                  | WHO 2000/2005 Guideline levels* | WHO 2000/2005 Reference levels* |
|---|------------------|--------------------------------------|------------------|---------------------------------|---------------------------------|
|   |                  | Concentration                        | Type of standard | Concentration                   | Concentration                   |
| Lead (Pb)<br>[in µg/m <sup>3</sup> ]  | 1 year           | 0.5                                  | Limit value      | 0.5                             | -                               |
| Benzene (C <sub>6</sub> H <sub>6</sub> )<br>[in µg/m <sup>3</sup> ]                       | 1 year           | 5                                    | Limit value      | 1.7                             | -                               |
| Arsenic (As)<br>[in ng/m <sup>3</sup> ]   | 1 year           | 6                                    | Target value     | -                               | 6.6                             |
| Cadmium (Cd)<br>[in ng/m <sup>3</sup> ]   | 1 year           | 5                                    | Target value     | -                               | 5                               |
| Nickel (Ni)<br>[in µg/m <sup>3</sup> ]  | 1 year           | 20                                   | Target value     | -                               | 25                              |
| Polycyclic Aromatic Hydrocarbons (expressed as Benzo(a)pyrene)<br>[in ng/m <sup>3</sup> ] | 1 year           | 1                                    | Target value     | 0.12                            | -                               |

Notes: \* WHO (2000) or WHO (2005) WHO global air quality guidelines; \*\* Unless specified otherwise below

## 7. Please indicate:

(a) air quality standards which you believe would be appropriate for the EU (*note: WHO guideline or reference levels; **guideline levels** or **1/100.000** risk levels are presented in bold font; 1/1.000.000 risk levels are depicted in italic font; existing EC standards are shown in blue font*) for:

i. Lead (Pb) [in µg/m<sup>3</sup>] – 1 year averaging period

- No standard
- No opinion
- 0.5 (0.5)**
- 0.25
- 0.15
- 0.05

ii. Benzene (C<sub>6</sub> H<sub>6</sub>) [in µg/m<sup>3</sup>] – 1 year averaging period

- No standard
- No opinion
- 5
- 3.4
- 1.7**
- 0.17

iii. Arsenic (As) [in ng/m<sup>3</sup>] – 1 year averaging period

- No standard
- No opinion
- 6.6 (6)**
- 4

- 2
- 0.66

iv. Cadmium (Cd) [in ng/m<sup>3</sup>] – 1 year averaging period

- No standard
- No opinion
- 5 (5)
- 2.5
- 1.5
- 0.5

v. Nickel (Ni) [in µg/m<sup>3</sup>] – 1 year averaging period

- No standard
- No opinion
- 25
- 20
- 10
- 2.5

vi. Benzo(a)pyrene [in ng/m<sup>3</sup>] – 1 year averaging period

- No standard
- No opinion
- 1
- 0.5
- 0.12
- 0.012

vii. For any of the above pollutants, do you think that values other than those above should be considered?

Consistent to its approach that EU should aim for the highest ambition, EFA supports the existing standards that propose lower pollutant levels than the WHO recommendation as all those efforts are least likely to have a health effect on the population e.g. arsenic, nickel.

(b) where your proposed standard should apply:

*[Note that 'all territory' refers to a standard that would need to be met throughout the territory or everywhere, 'background only' would need to be met only at urban background locations and exclude pollution hotspots, and 'at selected locations only' would need to be met only at locations specifically designated as specific air quality protection areas to protect sensitive populations.]*

|                                   | All territory                    | Background only       | At selected locations only |
|-----------------------------------|----------------------------------|-----------------------|----------------------------|
| Lead (1 year averaging period)    | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
| Benzene (1 year averaging period) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>      |
|                                   |                                  |                       |                            |

|  |                                  |                       |                       |
|--|----------------------------------|-----------------------|-----------------------|
| Arsenic (1 year averaging period)              | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cadmium (1 year averaging period)              | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nickel (1 year averaging period)               | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Benzo(a)pyrene (BaP) (1 year averaging period) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please also see Q15 below to indicate the type of EU air quality standard you consider most appropriate.

### Section 2.3: How to address air pollutants for which there are no WHO guideline levels or reference levels? (i.e. black carbon, ultrafine particles, ammonia, others)

#### \* 8. I wish to reply to specific questions on ‘How to address air pollutants for which there are no WHO guideline levels or reference levels?’

- Yes  
 No

There is a broader range of air pollutants for which there is an emerging body of evidence of health and/or environmental effects, for which no current quantitative target is included in the WHO guidance nor EU air quality standards. These are commonly referred to as ‘emerging air pollutants’, and include ammonia, black carbon, ultra-fine particulates, etc. For these air pollutants the WHO has not identified guideline exposure or reference levels.

#### 9. Do you see sufficient evidence for, and a need for, EU air quality standards to regulate:

(a) ANNUAL / SEASONAL average concentrations for the following ‘emerging air pollutants’?

|                            | Yes                              | Not yet               | No                    | No opinion            |
|----------------------------|----------------------------------|-----------------------|-----------------------|-----------------------|
| Ammonia (NH <sub>3</sub> ) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Black carbon               | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ultra-fine particles       | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other air pollutants       | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

If added ‘Yes’ above, please specify:

Despite evidence still emerging, there is already a solid body of knowledge attesting to the damaging effects of ammonia, black carbon and ultrafine particles on health. As far as respiratory diseases are concerned:

Black carbon is associated with decreased lung function, and exposure can increase respiratory symptoms and susceptibility of respiratory diseases. Available data point towards a statistically significant association with health outcomes in annual mean concentrations between 1,08 and 1,15µg/m<sup>3</sup> (WHO Air Quality Guidelines 2021).

Ammonia is a respiratory tract irritant and preliminary evidence associates even low-level exposure to ammonia with impaired lung functional capacity, cough and wheezing.

Ultrafine particles increase the risk of airway inflammation and exacerbates respiratory symptoms in patients with chronic airway diseases, including childhood asthma.

(b) POLLUTION PEAK concentrations (daily or hourly air quality standards) for the following 'emerging air pollutants'?

|                      | Yes                              | Not yet               | No                    | No opinion            |
|----------------------|----------------------------------|-----------------------|-----------------------|-----------------------|
| Ammonia (NH3)        | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Black carbon         | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ultra-fine particles | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other air pollutants | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

If added 'Yes' above, please specify:

EFA urges the Commission to address other air pollutants for which evidence on their adverse effects on health is either well-established or emerging. These include both natural and chemical pollutants such as:

Pollen and other aeroallergens are linked with increasing symptoms in people with respiratory allergies. Fuelled by air pollution, climate change has a direct effect on pollen, resulting in longer pollen seasons, more aggressive pollen and higher pollen counts.

Among others, the production of allergenic pollen is affected by the planting of highly allergenic trees and plants in urban settings. These include species indigenous in Europe, such as birch trees, olive trees, oilseed rapes, which are found at a wide scale in monocultures; but also new or non-indigenous plants such as ragweed, which was brought in Europe by humans and has spread across the continent, posing major challenges to respiratory health.

Moreover, there is emerging evidence showing an association between an increased presence of pollen bioaerosols and higher rates of COVID-19 infections. EFA calls on the EU to reinforce the current voluntary and under-resourced aerobiology networks and to make pollen monitoring obligatory in Europe.

Sand/dust storms are linked with respiratory problems to the people exposed, particularly those with a pre-existing lung disease. They can cause or worsen coughing and wheezing and obstructive respiratory diseases such as asthma and COPD. Drier conditions linked to climate change have led to an increase in sand/dust storms in Europe over the recent decades. Originating mostly from the Sahara desert, these sand and dust particles can travel long distances affecting many European areas, well beyond the Mediterranean Sea. Typically, sand/dust storms can affect local weather and visibility, but they also signal higher PM<sub>2,5</sub>, CO, and O<sub>3</sub> concentrations in the atmosphere.

Like in the case of pollen, preliminary evidence also suggests a significant increase of COVID-19 cases after the onset of a sandstorm. Therefore, EFA calls on the Commission to propose the monitoring of sand and dust in the air.

Volatile Organic Compounds (VOCs), found in both outdoor and indoor environments. Outdoors they emanate from transport emissions and the burning fossil fuels, wood, and garbage; while in indoor settings

they are linked with the use of certain materials such as paints, adhesives, cleaning products, detergents etc. Exposure to VOCs may cause upper and lower respiratory symptoms such as respiratory tract irritation, and contribute to the worsening of asthma.

**10. Please elaborate (i.e. if supportive: for which pollutants, how would these targets be set, at what level, over what timeframe; if not supportive, why not? Should alternative action be taken? Are there actions that should be put in place that would facilitate quantitative targets in the longer term)?**

At EFA we think that the EU should embrace a precautionary approach setting air quality standards for all the emerging pollutants. Targets must take the form of limit values, to be achieved as soon as possible, based on latest available evidence regarding the effects of each pollutant on health:

Black carbon is a sub-category of PM<sub>2,5</sub>, linked with the consumption of fossil fuels and wildfires, while also considered a climate change forcer

Ammonia originates mainly from agricultural activities, and contribute to the formation of fine particulate matter

Ultrafine Particles are linked with the burning of solid fuels, and therefore with indoor concentrations

From the above it becomes clear that the reduction of air pollution requires coordinated action across policies and sectors, and across both outdoor and indoor environments.

Moreover, EFA urges action on the other pollutants mentioned above:

On pollen, the EU needs to work towards two main directions:

Develop and support pioneer research on pollen, following up to the findings of the EU Atopika project regarding the impact of environmental change on pollen levels and the consequences of pollen allergy sensitisation across Europe. Another key knowledge gap is the cocktail effect of pollen in combination with other pollutants. An example to draw from is the new WHO Air Quality Guidelines, which prioritise the 'study of multipollutant exposures and specific air pollutants such as PM components, NO<sub>2</sub> and CO and their synergistic effects, including in the presence of pollens and other airborne allergens, as an important area of future research.

Reinforce pollen monitoring across the EU, through the establishment of an EU-wide real-time monitoring framework, facilitating the timely dissemination of information and health-related recommendations to affected people. Such a system can serve as a first step linking pollen monitoring with existing global monitoring systems such as Copernicus. Pollen monitoring in Europe today is fragmented, with no coordination among countries, leading to diverse messaging. Sometimes local organisations are entrusted with running monitoring systems (e.g. Sweden), but with little or no financial support. One way to address these gaps is EU support to projects looking into climate change and health e.g. the translation of meteorological and other forecast data into understandable information for end users. Such projects should bring together all relevant actors, including regulatory authorities, meteorological institutions and citizens.

In the case of sand/dust storms, a real-time monitoring system to inform the population and improve air quality forecast storms would be extremely important. The Atmosphere Monitoring Services of the EU Copernicus programme (CAMs) produce forecasts on dust storms, but are targeted mainly to scientists and researchers. There are also initiatives driven by the World Meteorological Organisation (WMO), aiming at the

development of early warning systems. Yet all these initiatives point to the fact that there is a persisting gap in readily accessible, health-related information targeted to patients and the wider population.

Section 2.4: What type of EU air quality standards should apply for different pollutants? (i.e. limit values, target values, long-term objective, average exposure levels, alert thresholds, other)

\* 11. I wish to reply to specific questions on ‘What type of EU air quality standards should apply for different pollutants?’

- Yes
- No

Different types of EU air quality standards are available in the existing legislative framework – namely:

- **LV limit value** – i.e. ‘to be attained within a given period and not to be exceeded once attained’;
- **TV target value** – i.e. ‘to be attained where possible over a given period’;
- **LTO long-term objective** – i.e. ‘to be attained in the long term, save where not achievable through proportionate measures’;
- **ECO exposure concentration obligation** – i.e. ‘based on an average level determined on the basis of measurements at urban background locations, reflects population exposure – and to be attained over a given period’;
- **(N)ERT (national) exposure reduction target** – i.e. ‘a percentage reduction of the average exposure to be attained where possible over a given period’.

For simplicity, these standards are here grouped below into those that relate levels not to be exceeded at **individual sampling points** (LV, TV, LTO) and those that relate to the calculation of **average exposure indicators** (ECO, (N)ERT).

In addition, the Ambient Air Quality Directives define critical levels and alert/information thresholds:

- **Alert threshold** – i.e. ‘a level at which immediate steps are to be taken by the Member States’;
- **Information threshold** – i.e. ‘a level beyond which immediate and appropriate information is necessary’;

*[Please see Directives 2008/50/EC and 2004/107/EC for the full definition of the above type of standards.]*

12. Please indicate what type of air quality standards you believe would be appropriate for the EU in the **SHORT TO MEDIUM TERM**?

(a) Based on levels not to be exceeded at **individual sampling points** (if appropriate, based on your above replies to Question 4)

|  | No standard | Limit value | Target value | Long-term objective | No opinion |
|--|-------------|-------------|--------------|---------------------|------------|
|  |             |             |              |                     |            |

|   |                       |                                  |                       |                       |                       |
|---|-----------------------|----------------------------------|-----------------------|-----------------------|-----------------------|
| Fine particulate matter (PM2.5) (1 year averaging period)   | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fine particulate matter (PM2.5) (24 hours averaging period) | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Particulate matter (PM10) (1 year averaging period)         | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Particulate matter (PM10) (24 hours averaging period)       | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ozone (O3) (peak season)                                    | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ozone (O3) (8 hours averaging period)                       | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sulphur dioxide (SO2) (24 hours averaging period)           | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sulphur dioxide (SO2) (1 hour averaging period)             | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sulphur dioxide (SO2) (10 minutes averaging period)         | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nitrogen dioxide (NO2) (1 year averaging period)            | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nitrogen dioxide (NO2) (24 hours averaging period)          | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nitrogen dioxide (NO2) (1 hour averaging period)            | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Carbon monoxide (CO) (24 hours averaging period)            | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Carbon monoxide (CO) (8 hours averaging period)             | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

(b) Based on the calculation of an **average exposure indicator** (national or regional)

|   | ECO at national level    | ECO at a more regional level | (N) ERT                  | No opinion                          |
|---|--------------------------|------------------------------|--------------------------|-------------------------------------|
| Fine particulate matter (PM2.5) (1 year averaging period) | <input type="checkbox"/> | <input type="checkbox"/>     | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Particulate matter (PM10) (1 year averaging period)       | <input type="checkbox"/> | <input type="checkbox"/>     | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Ozone (O3) (peak season)                                  | <input type="checkbox"/> | <input type="checkbox"/>     | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Nitrogen dioxide (NO2) (1 year averaging period)          | <input type="checkbox"/> | <input type="checkbox"/>     | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

(c) Where in question 12(b) you have indicated that an average exposure indicator is preferred, what considerations should be taken into account when defining the level of such indicators, and how ambitious should they be?

|   | Comment |
|---|---------|
| Fine particulate matter (PM2.5) (1 year averaging period) |         |
| Particulate matter (PM10) (1 year averaging period)       |         |
| Ozone (O3) (peak season)                                  |         |
| Nitrogen dioxide (NO2) (1 year averaging period)          |         |



**13. Please indicate what type of air quality standards you believe would be appropriate for the EU in the LONGER TERM?**

(a) Based on levels not to be exceeded at **individual sampling points** (if appropriate, based on your above replies to Question 5)

|   | No standard           | Limit value                      | Target value          | Long-term objective   | No opinion            |
|---|-----------------------|----------------------------------|-----------------------|-----------------------|-----------------------|
| Fine particulate matter (PM2.5) (1 year averaging period)   | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fine particulate matter (PM2.5) (24 hours averaging period) | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Particulate matter (PM10) (1 year averaging period)         | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Particulate matter (PM10) (24 hours averaging period)       | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ozone (O3) (peak season)                                    | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ozone (O3) (8 hours averaging period)                       | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sulphur dioxide (SO2) (24 hours averaging period)           | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sulphur dioxide (SO2) (1 hour averaging period)             | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sulphur dioxide (SO2) (10 minutes averaging period)         | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nitrogen dioxide (NO2) (1 year averaging period)            | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nitrogen dioxide (NO2) (24 hours averaging period)          | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nitrogen dioxide (NO2) (1 hour averaging period)            | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Carbon monoxide (CO) (24 hours averaging period)            | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Carbon monoxide (CO) (8 hours averaging period)             | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

(b) Based on the calculation of an **average exposure indicator** (national or regional)

|   | ECO at national level    | ECO at a more regional level | (N) ERT                  | No opinion                          |
|---|--------------------------|------------------------------|--------------------------|-------------------------------------|
| Fine particulate matter (PM2.5) (1 year averaging period) | <input type="checkbox"/> | <input type="checkbox"/>     | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

|   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| Particulate matter (PM10) (1 year averaging period) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Ozone (O3) (peak season)                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Nitrogen dioxide (NO2) (1 year averaging period)    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

(c) Where in question 13(b) you have indicated that an average exposure indicator is preferred, what considerations should be taken into account when defining the level of such indicators, and how ambitious should they be?

|   | Comment |
|---|---------|
| Fine particulate matter (PM2.5) (1 year averaging period) |         |
| Particulate matter (PM10) (1 year averaging period)       |         |
| Ozone (O3) (peak season)                                  |         |
| Nitrogen dioxide (NO2) (1 year averaging period)          |         |

**14. Would the introduction of an additional Average Exposure Indicator (and related obligations at national or regional level) increase:**

(a) The costs of achieving compliance with the Directives? *(Note that for fine particulate matter (PM2.5) these metrics already exist)*

|       | High compliance costs | Low compliance costs  | No additional compliance costs | No opinion                       |
|-------|-----------------------|-----------------------|--------------------------------|----------------------------------|
| PM10  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input checked="" type="radio"/> |
| Ozone | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input checked="" type="radio"/> |
| NO2   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input checked="" type="radio"/> |
| Other | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input checked="" type="radio"/> |

If so, please elaborate: what costs, for whom, and how significant would these be? Where available, please provide any data or quantitative information which could help inform the quantification of an additional cost of these measures.

(b) The administrative burden of achieving compliance with the Directives? *(Note that for fine particulate matter (PM2.5) these metrics already exist)*

|       | High administrative burden | Low administrative burden | No additional administrative burden | No opinion                       |
|-------|----------------------------|---------------------------|-------------------------------------|----------------------------------|
| PM10  | <input type="radio"/>      | <input type="radio"/>     | <input type="radio"/>               | <input checked="" type="radio"/> |
| Ozone | <input type="radio"/>      | <input type="radio"/>     | <input type="radio"/>               | <input checked="" type="radio"/> |
| NO2   | <input type="radio"/>      | <input type="radio"/>     | <input type="radio"/>               | <input checked="" type="radio"/> |
| Other | <input type="radio"/>      | <input type="radio"/>     | <input type="radio"/>               | <input checked="" type="radio"/> |

If so, please elaborate: what costs, for whom, and how significant would these be? Where available, please provide any data or quantitative information which could help inform the quantification of an additional cost of these measures.

**15. Please indicate what type of air quality standards you believe would be appropriate for the EU, based on levels not to be exceeded at individual sampling points?**

|                                   | No standard           | Limit value                      | Target value          | Long-term objective   | No opinion            |
|-----------------------------------|-----------------------|----------------------------------|-----------------------|-----------------------|-----------------------|
| Lead (1 year averaging period)    | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Benzene (1 year averaging period) | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|  |                       |                                  |                       |                       |                       |
|--|-----------------------|----------------------------------|-----------------------|-----------------------|-----------------------|
| Arsenic (1 year averaging period)              | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cadmium (1 year averaging period)              | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nickel (1 year averaging period)               | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Benzo(a)pyrene (BaP) (1 year averaging period) | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**16. For several air pollutant objective averaging periods, WHO guidelines exist but specific EU air quality standards do not: PM2.5 (24 hour); SO2 (10 minute); NO2 (24 hour); CO (24 hour); and Ozone (peak season). Would the introduction of additional air pollutant objective averaging periods increase:**

(a) The costs of achieving compliance with the Directives?

|                                  | High compliance costs | Low compliance costs  | No additional compliance costs | No opinion                       |
|----------------------------------|-----------------------|-----------------------|--------------------------------|----------------------------------|
| PM2.5 (24 hour averaging period) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input checked="" type="radio"/> |
| SO2 (10 minute averaging period) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input checked="" type="radio"/> |
| NO2 (24 hour averaging period)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input checked="" type="radio"/> |
| CO (24 hour averaging period)    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input checked="" type="radio"/> |
| Ozone (O3) (peak season)         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input checked="" type="radio"/> |

If so, please elaborate: what type of costs, for whom, and how significant would these be? Where available, please provide any data or quantitative information which could help inform the quantification of an additional cost of these measures.

(b) The administrative burden of achieving compliance with the Directives?

|                                  | High administrative burden | Low administrative burden | No additional administrative burden | No opinion                       |
|----------------------------------|----------------------------|---------------------------|-------------------------------------|----------------------------------|
| PM2.5 (24 hour averaging period) | <input type="radio"/>      | <input type="radio"/>     | <input type="radio"/>               | <input checked="" type="radio"/> |
| SO2 (10 minute averaging period) | <input type="radio"/>      | <input type="radio"/>     | <input type="radio"/>               | <input checked="" type="radio"/> |
|                                  |                            |                           |                                     |                                  |

|                                |                       |                       |                       |                                  |
|--------------------------------|-----------------------|-----------------------|-----------------------|----------------------------------|
| NO2 (24 hour averaging period) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
| CO (24 hour averaging period)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
| Ozone (O3) (peak season)       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |

If so, please elaborate: what type of costs, for whom, and how significant would these be? Where available, please provide any data or quantitative information which could help inform the quantification of an additional cost of these measures.

**17. Are there pollutants, or averaging pollutants, currently subject to an EU air quality standard that in your view no longer are meaningful, and can be abolished to save administrative costs?**

- Yes  
 No

Please explain:

Restrictive measures on air pollutants arise from scientific findings that associate them with certain adverse health outcomes. Accordingly, at EFA we believe that it is only through the scientific process that these correlations can be reversed. To our knowledge, so far there has been no evidence that a pollutant that is currently within the scope of the EU AQDs has stopped being harmful for health.

**Section 2.5: What are likely costs of and expected benefits from setting revised EU air quality standards? (i.e. societal cost, societal benefits, implementation and administrative costs, implementation barriers)**

**\* 18. I wish to reply to specific questions on ‘What are likely costs of and expected benefits from setting revised EU air quality standards?’**

- Yes  
 No

**19. How would different groups in society benefit from achieving stricter EU air quality standards?**

*Rate from 1 (These groups would benefit proportionately less than the average), to 3 (Groups would benefit in a similar way as the average), to 5 (These groups would benefit proportionately more than the average)*

|  | 1                     | 2                     | 3                     | 4                                | 5                                | No opinion            |
|--|-----------------------|-----------------------|-----------------------|----------------------------------|----------------------------------|-----------------------|
| All citizens                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Citizens living in urban areas             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Citizens living in rural areas             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Those with pre-existing medical conditions | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |

|                              |                       |                       |                       |                                  |                                  |                       |
|------------------------------|-----------------------|-----------------------|-----------------------|----------------------------------|----------------------------------|-----------------------|
| Elderly                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Children                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Lower socio-economic status  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Lower educational attainment | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Unemployed                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Other (please specify)       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |

If other, please specify:

Pregnant women

**20. How would different groups in society carry the costs for achieving stricter EU air quality standards?**

*Rate from 1 (These groups would face disproportionately higher costs less than the average), to 3 (Groups would face costs in a similar way as the average), to 5 (Groups face disproportionately lower costs than the average)*

|  | 1                     | 2                                | 3                                | 4                                | 5                                | No opinion            |
|--|-----------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------|
| All citizens                               | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Citizens living in urban areas             | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Citizens living in rural areas             | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Those with pre-existing medical conditions | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Elderly                                    | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Children                                   | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Lower socio-economic status                | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Lower educational attainment               | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Unemployed                                 | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Other (please specify)                     | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |

If other, please specify:

Pregnant women

**21. How would different economic actors benefit from achieving stricter EU air quality standards?**

Rate from 1 (Economic actors would benefit proportionately less than the average), to 3 (Economic actors would benefit in a similar way as the average), to 5 (Economic actors would benefit proportionately more than the average)

|   | 1                                | 2                                | 3                                | 4                                | 5                                | No opinion            |
|---|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------|
| Transport sector in general             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Personal mobility providers             | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Logistic transport service providers    | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Manufacturing industry (incl. vehicles) | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Energy providers (combustion based)     | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Energy providers (non combustion based) | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Waste sector                            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Construction                            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Mining and quarrying                    | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| Healthcare sector                       | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| SMEs (all sectors)                      | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| Innovative industries (all sectors)     | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Public authorities                      | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| Other (please specify)                  | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |

**22. How would different economic actors carry the costs for achieving stricter EU air quality standards?**

Rate from 1 (Economic actors would face disproportionately higher costs less than the average), to 3 (Economic actors would face costs in a similar way as the average), to 5 (Economic actors face disproportionately lower costs than the average)

|   | 1                                | 2                                | 3                                | 4                                | 5                     | No opinion            |
|---|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------|-----------------------|
| Transport sector in general             | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| Personal mobility providers             | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| Logistic transport service providers    | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| Manufacturing industry (incl. vehicles) | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| Energy providers (combustion based)     | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| Energy providers (non combustion based) | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Waste sector                            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| Construction                            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |



|                                     |                       |                                  |                                  |                                  |                       |                       |
|-------------------------------------|-----------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------|-----------------------|
| Mining and quarrying                | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| Healthcare sector                   | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| SMEs (all sectors)                  | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| Innovative industries (all sectors) | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Public authorities                  | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (please specify)              | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |

**23. One of the critical costs associated with changing air quality standards will be the need for additional measures and/or additional air quality plans.**

**Do you have any evidence regarding the implementation costs and/or administrative burdens associated with developing and implementing air quality plans? This can concern burden to your or other organisations of the design, implementation and ongoing costs of the plans (but excluding any technology costs associated with pollutant mitigation techniques that arise in response to the actions contained in plans). Where possible, please provide detail on: what activities costs are associated with, whether costs are upfront or ongoing, who the costs fall on, and where possible estimates of costs in EUR or person time (all evidence is useful, even where partial).**

**24. Where air quality standards are changed (and made stricter), this will could change the number of plans that need to be made in response. Could this also impact on the administrative burden of developing individual air quality plans? If so, please explain why and how this would influence these burdens.**

**25. Would achieving stricter EU air quality standards have a positive or negative impact on other policy areas (either directly or indirectly)?**

*Rate from 1 (Significant negative impact), 2 (minor negative impact), 3 (neutral or no-significant impact), 4 (minor positive impact), to 5 (Significant positive impact)*

|  | 1                     | 2                     | 3                     | 4                                | 5                                | No opinion                       |
|--|-----------------------|-----------------------|-----------------------|----------------------------------|----------------------------------|----------------------------------|
| Climate change                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            |
| Productivity and output of EU businesses | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |
| EU Competitiveness                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |
| EU SMEs                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |
| EU Employment                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |
| Indoor air pollution                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            |
| Noise pollution                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> |

|                        |                       |                       |                       |                       |                                  |                                  |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|----------------------------------|
| Pollution of water     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> |
| Pollution of soil      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            |
| Other (please specify) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            |

If other, please specify:

Public health

## Section 2.6: Concluding questions

**26. Do you have any other comments regarding Policy Area 1? Please also upload any supporting evidence or material you feel is pertinent to the discussion of issues and impacts in this area:**

The updated WHO Air Quality Guidelines of 2021 represent an adjustment of the recommended pollution levels downwards, in light of more recent scientific evidence showing that most pollutants can damage health at even lower levels than previously thought. By fully aligning with the latest WHO guidelines, the EU can demonstrate its determination to prioritise health addressing one of the major environmental risk factors (as demonstrated in the Special Eurobarometer survey 501 (2019)), while also proving its commitment to evidence-based, science-driven policymaking.

However, science advances fast, updating our knowledge on health risks, equipped with new methodologies and tools, and ever more detailed scopes of analysis. The update of the WHO AQGs offers a good example of this process. On the other hand, policymaking is notoriously slow, constantly in a pursuit to catch-up with science.

But air pollution is an environmental and health challenge that contributes to the climate emergency. As such, it requires swift and decisive action. In fact, aligning with the WHO is an absolutely necessary first step, to be complemented by a mechanism for automatic review and update of EU air quality standards, ensuring swift regulatory adjustment as new evidence emerges.

Evidence in support of EFA's positions:

EU Project Atopica <https://cordis.europa.eu/article/id/92577-changing-environment-helps-spread-allergenic-pollen>

Special Eurobarometer report 501 <https://europa.eu/eurobarometer/surveys/detail/2257>

A. Damialis, S. Gilles et al. 'Higher airborne pollen concentrations correlated with increased SARS-CoV-2 infection rates, as evidenced from 31 countries across the globe', Proceedings of the National Academy of Sciences, 2021, <https://www.pnas.org/content/118/12/e2019034118>

A. Tobias, A. Karanasiou, F. Amato, X. Querol, 'Health effects of desert dust and sand storms: a systematic review and meta-analysis', Environmental Epidemiology, 2019 [https://journals.lww.com/environepidem/Fulltext/2019/10001/Health\\_effects\\_of\\_desert\\_dust\\_and\\_sand\\_storms\\_\\_a.1209.aspx](https://journals.lww.com/environepidem/Fulltext/2019/10001/Health_effects_of_desert_dust_and_sand_storms__a.1209.aspx)

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