

# Summary Report

## Air Quality: Revision of EU Rules - First Stakeholder Meeting

23 September 2021

### 1.1 Introduction

As part of the process of ‘[Air quality: revision of EU rules](#)’, the European Commission is looking to consult a wide range of stakeholders. The aim of the first stakeholder meeting was to confirm the issues identified for the impact assessment and gather initial views on the ambition level for the revision. This document aims to summarise the main topics and messages discussed during this first stakeholder meeting on the revision of EU rules on air quality, i.e. the Ambient Air Quality Directives (Directive 2004/107 and 2008/50).

### 1.2 Agenda

The first stakeholder meeting was a whole day event, during which a number of topics relevant to the revision of air quality rules were discussed. A brief summary of each topic is provided in the table below. For the full [agenda](#), please refer to the Commission website. The main takeaways from each session are summarised in section 1.4. Furthermore, the [presentation by the Commission and consultants](#) as well as the [presentation by the World Health Organization](#) are also available at the Commission website.

Table 0-1 Overview of the topics discussed during the first stakeholder meeting

Item	Brief description
<b><i>Introduction to the impact assessment for the revision of the EU Ambient Air Quality Directives</i></b>	During the first session, representatives from the Commission presented a number of shortcomings identified in relation to the current air quality rules building on the findings of the Fitness Check of the Ambient Air Quality Directives (e.g. regarding implementation, governance, or air quality assessment), followed by an intervention logic for the impact assessment of the revision of the rules. The revision will focus on three main policy areas: (1) considering closer alignment of EU air quality standards with scientific knowledge, including the 2021 Air Quality Guidelines of the World Health Organization; (2) improving the legislative framework, including provisions on penalties and public information; and (3) strengthening of air quality monitoring, modelling and plans. The details of each policy area are outlined in the sections below.
<b><i>Presentation on the revised WHO Air Quality Guidelines</i></b>	The next session was dedicated to a presentation by the World Health organization (WHO) on the revised WHO Air Quality Guidelines, as published on 22 September 2021. During the presentation, the WHO presented the updated guideline exposure levels, and touched upon related topics such as the importance of the Guidelines and how to best make use of them.

<p><b><i>Policy area 1: Closer alignment of air quality standards with scientific knowledge</i></b></p>	<p>After a short introductory presentation from the Commission, the consultant team (IIASA and Met Norway) presented the preparatory modelling analysis, air pollutant concentration projections for 2030 and 2050 in the baseline scenario and in the maximum feasible reduction scenario. Stakeholders had the opportunity to express their views on the desired level of alignment with the 2021 WHO Air Quality Guidelines.</p>
<p><b><i>Policy area 2: Improving the air quality legislative framework</i></b></p>	<p>The session began with a short introductory presentation by Commission highlighting the components of the intervention logic relevant for this policy area. This was followed by a presentation from the consultants (Trinomics) providing a non-exhaustive list of potential interventions for consideration under Policy Area 2, which looks at improving the legislative framework for air quality. Currently, the project is considering six key topics for revision, with a number of regulatory and non-regulatory interventions being proposed.</p>
<p><b><i>Policy area 3: Strengthening of air quality monitoring, modelling and plans</i></b></p>	<p>The last part of the stakeholder meeting began with a short introductory presentation by the Commission, highlighting the components of the intervention logic relevant for policy area 3. The consultants (Ricardo) presented a non-exhaustive list of potential interventions for consideration under this policy area, consisting of eight main topics to address the identified shortcomings as regards air quality monitoring, modelling and plans.</p>

### 1.3 Participants

The meeting was attended by 345 participants (with a total of 401 registered participants). An invitation was sent directly to a wide range of stakeholder groups, such as Member State representatives at all levels (local, regional, national), businesses and business associations, research organisations, NGOs and consultancies. The Commission also disseminated the invitation to expert networks. Lastly, the meeting was also advertised online on the [European Commission’s website](#), therefore all interested stakeholders were given the opportunity to participate.

The figures below provide an overview of the main groups of stakeholders that attended the workshop. As shown in the Figure 0-1 below, all major stakeholder groups were represented during the stakeholder meeting. The largest group (n=125) of stakeholders represented was public authorities at national level, followed by representatives of regional authorities (n=54), research and academia (n=54) and EU-level authorities (n=23)<sup>1</sup>. From the information provided it was not possible to identify the stakeholder group of ten stakeholders, these are therefore marked as ‘unclear’.

Figure 0-2 provides an overview of countries of origin of stakeholders who participated in the first stakeholder workshop. The highest number of participants were EU-level stakeholders (n=51)<sup>2</sup>, meaning there is no affiliation to a specific Member State and the organisations often represent views from across all Member States. This was followed by stakeholders from Germany (n=34), Spain (n=32) and Italy (n=23). A number of stakeholders from non-EU countries also participated in the workshop, for example from the UK, USA, Israel and Turkey. The consultants supporting the Impact Assessment are grouped under ‘other’ and stakeholders where their country of origin was not clear are marked as ‘unclear’.

<sup>1</sup> EU-level authorities also include the Commission colleagues working on the IA.

<sup>2</sup> EU-level stakeholders also include the Commission colleagues working on the IA.

Figure 0-1 Overview of stakeholder groups represented during the first stakeholder meeting

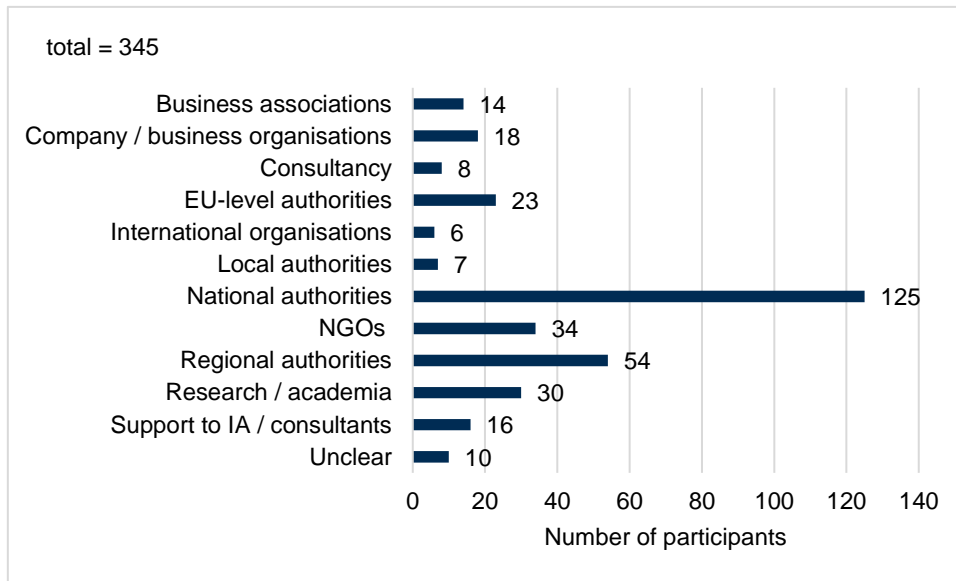
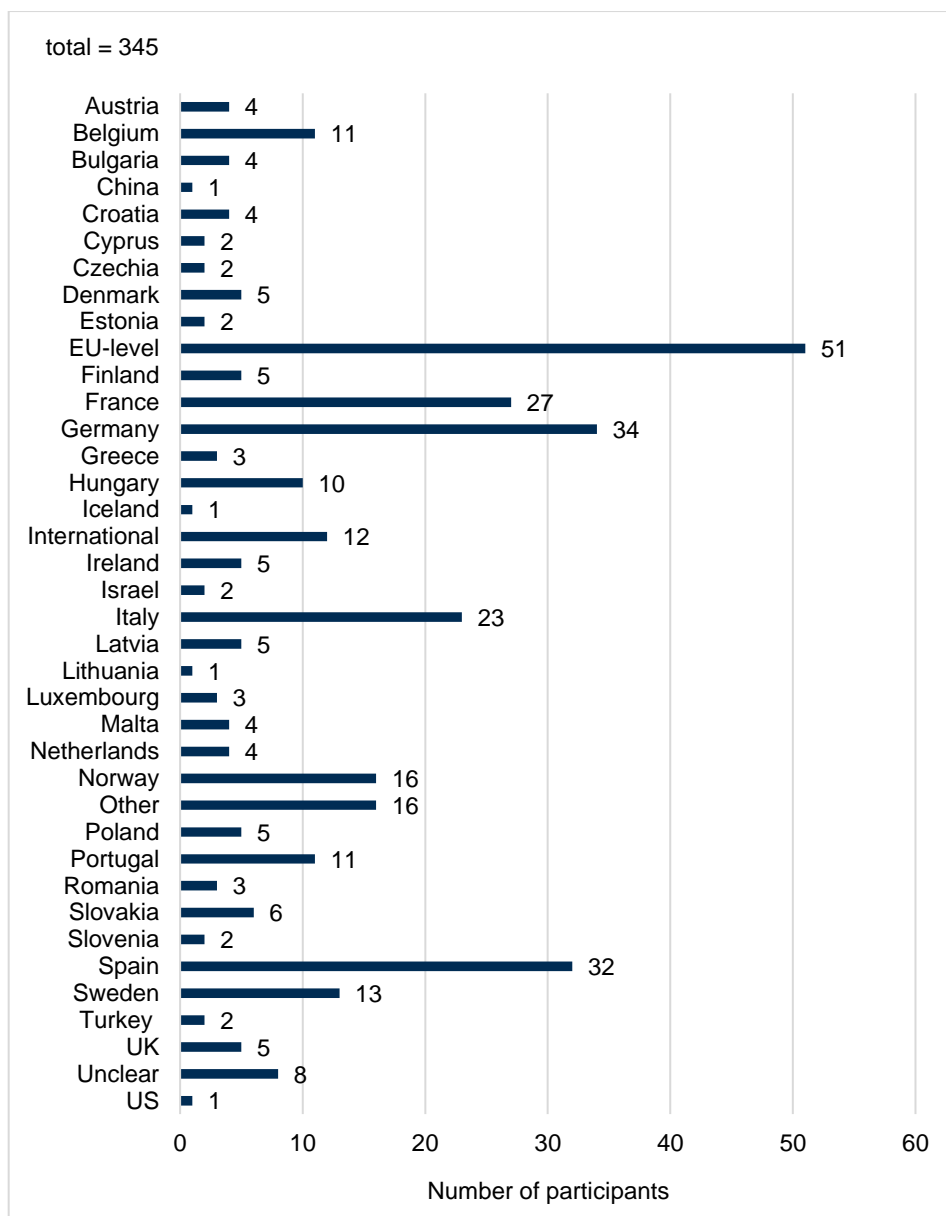


Figure 0-2 Overview of countries of origin of participants



## 1.4 Main takeaways

### 1.4.1 Session 1 - Policy Area 1

Session 1 focussed on different policy options related to aligning more closely the EU air quality standards with scientific knowledge - including the latest recommendations of the World Health Organisation (WHO). The consultants presented a preparatory analysis based on the GAINS and uEMEP models, which will inform the impact assessment of different policy options. At this stage, the analysis focussed on fine particulate matter (PM<sub>2.5</sub>) and nitrogen dioxide (NO<sub>2</sub>) - see Textbox 0-1.

#### Textbox 0-1 Summary of the preliminary analysis of policy area 1

- Significant reductions in exposure are observed in the Baseline and the Maximum Feasible Reduction (MFR) scenarios between 2020-2030 and 2020-2050 which are much larger than model uncertainties.
- Wide-spread compliance with current Ambient Air Quality limit values are expected for Nitrogen Dioxide (NO<sub>2</sub>) and Fine particulate matter (PM<sub>2.5</sub>) in the baseline.

- The model slightly underestimates both PM<sub>2.5</sub> and NO<sub>2</sub>, which will be taken into account when drawing conclusions from the modelling.
- Large reductions in traffic emissions for Nitrogen Oxides (NO<sub>x</sub>) will lead to other sources dominating NO<sub>2</sub> exposure e.g. under the MFR scenario, by 2050 agriculture is expected to be the sector contributing the most to NO<sub>x</sub> emissions in the EU27.
- Residential combustion will remain a key source of PM<sub>2.5</sub> exposure. By 2050 modelling suggests the second highest contributor to PM<sub>2.5</sub> emissions is the residential sector, behind the industry sector (both under the Baseline and the MFR scenario).

The ensuing discussion focussed on the level of alignment with the WHO recommendations to be aspired to. Several non-governmental organisations (NGOs) with focus on human health and or the environment argued strongly in favour of **full alignment** of EU air quality standards with the WHO guideline exposure levels by 2030. Conversely, several Member State representatives commented on the need to consider the **measurability and acceptability of future measures** needed to attain a closer alignment, and raised the questions of feasibility and timing to reach some of the WHO recommendations across the EU. Industry stakeholders also cautioned that uncertainties related to technical feasibility, local issues, biogenic emissions and measurements remained.

Stakeholders also stressed the need to look at **additional pollutants** in the analysis, including both those covered by the revised WHO Air Quality Guidelines in detail, as well as those that are not. As regards the former category, **PM<sub>10</sub>** and **ozone** were emphasised, especially by representatives of Competent Authorities. Furthermore, representatives from NGOs and Competent Authorities raised points related to the inclusion of critical levels for **ammonia**, including as regards its impact on ecosystems. NGOs also stressed the need to address **ultrafine particles** and **black carbon** (noting that for the latter the WHO recommendation fell short of their expectations).

During the discussion NGOs, including those working closely with the health sector and medical professionals, stressed that air pollution has a huge impact already at low concentration levels, with existing supporting evidence. This is, in particular the case for patients with **respiratory issues**. As this evidence is continuously growing and pointing to improved understanding, it would be important to keep air quality standards under a **more regular review**.

A key point of discussion was the design of EU air quality standards that would also better capture population exposure - i.e. to develop, in addition to **location-based limit values**, air quality standards that factor in how many people and which population categories are exposed to air pollution. A suggestion that was voiced both by representatives of regional Competent Authority and NGOs was to consider a (relative) **regional exposure reduction target**. This would help to close the gap between the current status and the WHO guidelines that has now greatly increased due to higher ambitions and that there are regional differences across Europe.

Stakeholders from research institutes and Competent Authorities concerned with maintaining air quality monitoring networks pointed to **measurement uncertainties of air pollutants**, and especially for fine particulate matter (PM<sub>2.5</sub>) at **low concentration levels** (especially when close to the detection limit). This may mean that measurements showing concentrations at a level recommended by the WHO may not be reflecting the actual concentrations accurately or at least with the same data quality as at higher concentrations (and thus, the actual concentrations could be either much higher or lower).

Finally, stakeholders agreed that it is important to account for the synergies between **climate policies** and other **sectoral emission policies** in assessing feasibility of air quality standards. A key point raised by NGOs was the need for transparent description of the ‘**maximum feasible reduction**’ scenario - and to be clear about which assumptions this includes, and which it does not. For example, if it does not include assumptions about lifestyle changes (including dietary patterns), it would be important to be clear about this (and label the scenario to refer to ‘maximum technical feasible reduction’ scenario).

#### 1.4.2 Session 2 - Policy Area 2

During the session on Policy Area 2, six elements addressing the improvement of the air quality legislative framework were considered and respective interventions presented.

Figure 0-3 Overview of areas to consider under Policy Area 2

Elements to consider	Possible interventions
Adding an explicit mechanism for adjusting EU air quality standards to the evolving technical and scientific progress	<ul style="list-style-type: none"> <li>Mechanism to adjust air quality standards to new WHO guidelines / latest scientific advice;</li> <li>allow EU MS to adopt more stringent standards reflecting technical and scientific progress + notify EC;</li> <li>require the priority air pollutant list to be updated periodically and add emerging pollutants to it.</li> </ul>
Further defining air quality standards (average exposure indicators) and exceedances actions	<ul style="list-style-type: none"> <li>Introduce 'limit values' for all air pollutants, replacing 'target values';</li> <li>add short-term standards for all air pollutants with currently only long-term standards, e.g. PM2.5;</li> <li>require Member States to take short-term action plans in case of exceedances of short-term standards.</li> </ul>
Expanding actions required to address exceedances (air quality plans and short-term action plans)	<ul style="list-style-type: none"> <li>Further specify the obligation for measures to keep exceedance period as short as possible;</li> <li>introduce obligation for effective short-term action plans to prevent / tackle air pollution events;</li> <li>clearer coordination between short-term action plans and air quality plans.</li> </ul>
Specifying provisions to guide the development of air quality plans, including on governance	<ul style="list-style-type: none"> <li>Guidance on the information to be included in air quality plans;</li> <li>define requirements in terms of air quality plans vs air quality zones to ensure harmonisation;</li> <li>introduce legislative instruments for clear responsibilities between different levels of MS governance.</li> </ul>
Expanding the provision on sanctions and penalties	<ul style="list-style-type: none"> <li>Introduction of minimum penalty levels;</li> <li>create a fund from penalties and use proceeds to compensate for damages / fund AQ measures;</li> <li>'access to justice' clause in the AAQD.</li> </ul>
Expanding the requirements on the provision of information	<ul style="list-style-type: none"> <li>Standardisation of necessary health related air quality information provisions, including air quality indices, timelines, or air pollutant alert thresholds.</li> </ul>

Among the different stakeholder groups, there was a general support for the proposed elements to be tackled and possible interventions to be introduced. However, stakeholder views differed as to the conditions for implementation and timing. During a discussion on whether there were any missing elements in the proposed list of interventions, it was pointed out that indoor pollution should also be addressed (which is outside of the scope of the revision of the Ambient Air Quality Directives).

The discussion with participants was structured around the six specific areas of consideration. With regards to the **first element of interventions (adding an explicit mechanism for adjusting air quality standards to technical and scientific progress)**, stakeholders were in agreement with the elements proposed, however ideas differed how their objectives can be achieved. NGO representatives suggested for the Commission to consider delegated acts to keep air quality (and potentially also other) standards aligned with technical scientific progress, with a response from the Commission that while this can be considered, the EU Treaties provide certain limitations regarding the use of delegated acts. Inclusion of aero allergens was also suggested for a revised Ambient Air Quality Directive. A stakeholder from a national Competent Authority also suggested a regular cycle of updates to the legislation rather than working towards varying timebound targets.

There was a consensus with regards to the **second set of interventions (on further defining air quality standards and exceedance actions)** that using limit values is appropriate. However, a regional authority did not advocate the addition of more limit values, but instead suggested the focus should be on suggestions for technologies that address exceedance issues and can be implemented in specific regions. Other stakeholders voiced a preference for the use of limit values, which are understood by all, rather than target values, which are not clear for citizens and administrations. It was pointed out that a legally binding limit value that triggers local response is not appropriate for ozone as it is a secondary pollutant. Lastly, an NGO stakeholder pointed out that there should be more clarity on the requirement for action on authorities in case of exceedances of target values, in a similar way as for limit values.

During the discussion on the **third set of interventions (on expansion of actions required to address exceedances)**, it was suggested to include a checklist of measures in the revised Ambient Air Quality Directives that public authorities are obliged to consider when developing their respective air quality plans. Some stakeholders also spoke in favour of short-term air quality plans or short-term action plans as they would allow for immediate reactions with short-term measures.

There was largely consensus on the interventions under the **fourth set of interventions (specifying provisions to guide the development of air quality plans and on governance)**. Stakeholders agreed that there is a need for a clear framework on allocation of responsibilities and co-ordination across different levels of government. This framework should ensure that responsibilities are directed at the correct authorities with appropriate competence and logistics. It was suggested that the revised air quality rules could require matching competent authorities and obligations similarly as to the National Emission reduction commitments Directive (NECD).

During the discussion on the **fifth set of interventions** (provision on sanctions and penalties), stakeholders generally supported that this element should be addressed under the revision of the Ambient Air Quality Directives. It was suggested to take inspiration from the recent decision of the French Conseil d'Etat which imposed penalties on the French government for not taking sufficient air quality measures and attributed those penalty payments to air quality projects and research. Stakeholders belonging to the NGO sector suggested that the revised Ambient Air Quality Directives should include a mechanism that allows for the burden of proof to be reversed, meaning that the burden of proof does not lie with citizens, which could mean that citizens' access to compensation would be easier. However, some national authorities pointed out that in instances where the state was the main polluter, penalty payments could deprive it of the funds necessary to take air quality measures.

Lastly, there was general agreement on the elements under the **sixth area of interventions (expanding the provision of information requirements)**. The points raised in the discussion included the importance of access to information, which is deemed crucial to protection of public health and also directly connected to other provisions, for example, on access to justice. Stakeholders also agreed that the revision should also ensure that especially vulnerable groups have access to information.

#### **1.4.3 Session 3 - Policy Area 3**

During the session on Policy Area 3, eight elements addressing the improvements on ambient air quality monitoring, modelling and plans were considered and respective interventions presented.

Figure 0-4 Overview of areas to consider under Policy Area 3

<p><b>Augment assessment regime rules</b></p>	<p><b># / type of sampling points</b></p>	<p><b>Continuity / discontinuation / relocation of sampling points</b></p>	<p><b>Micro and macro-scale siting of sampling points</b></p>
<p>In compliance assessment:                      1. Address ambiguity around indicative measurements                      2. Clarify use of models                      3. Clarify role of industrial point source monitoring</p>	<p>4. Redefine requirements on # sampling points                      5. Clarify % split sampling point type                      6. Clarify use of indicative monitoring</p>	<p>7. Requirements on monitoring for x years after compliance</p>	<p>8. Spatial representativeness to define locations                      9. Further define micro siting criteria</p>
<p><b>Data quality</b></p>	<p><b>Which pollutants to measure and how</b></p>	<p><b>Assessment of natural / winter sanding / transboundary contributions</b></p>	<p><b>Requirements around developed AQ plans</b></p>
<p>10. Incorporate FAIRMODE Modelling Quality Objective                      11. Define how Quality Objective is applied in practice                      12. Protocol when data capture &lt;90%</p>	<p>13. Increased monitoring of ozone and VOCs. Changes to HM and PAH requirements.                      14. Mandatory urban supersites                      15. Monitoring standards for emerging pollutants</p>	<p>15. Clearer guidance on estimating contribution from winter sanding/salting and/or natural sources                      16. Mandatory estimation of transboundary contribution</p>	<p>Guidance on:                      18. Source apportionment                      19. Developing AQ plans                      20. Cost benefit analysis</p>

Intervention area 1 focuses on **augmenting assessment regime rules**. In general, the use of models to supplement assessment methods was welcomed, though it was noted this should not be at the expense of a reduced monitoring network. It was commented by an NGO that modelling is beneficial in the assessment of exposure reduction estimation over a wide regional area, where monitoring alone may omit some pollution hotspot areas. A stakeholder commented on the importance of a revised Directive which should incorporate a mechanism that takes into account advancing scientific evidence.

**On the number and types of sampling points** (intervention area 2), it was noted that monitoring was used for several purposes including to determine source apportionment and the verification of models which relied on fixed measurement. It was also suggested by a national Competent Authority that ad-hoc measurements could also be useful. It was suggested that chemical composition of particulate matter should be mandatory to assess in order to assist in source apportionment attribution. There was discussion that the number of sampling points may need to be adapted depending on the size of the city, with larger cities being required to operate a higher density monitoring network, particularly given the large variation in traffic sites in urban areas. The importance of clear meta-data to describe a site to enable cross-city comparison was noted. NGOs and national Competent Authorities advocated an increase in the number of  $PM_{2.5}$  stations, and more broadly set clearer requirements for the proportion between different types of monitoring stations, which would entail abandoning the  $PM_{10}/PM_{2.5}$  ratio. However, another national Competent Authority pointed that increasing the number of monitoring stations may not be feasible due to limited public administration budgets. Regarding the types of monitoring stations, the use of low- cost sensors as additional samplers was suggested but it was noted these required a reference method which is not yet harmonized. Finally, two national Competent Authorities stated that the link to health impact analysis should be considered in the monitoring network, in addition to compliance assessment.

Intervention area 3 focusses on **continuity / discontinuation / relocation of sampling points**. The importance of continuity of the current monitoring network was stressed by several stakeholders,



particularly to support pollutant trend analysis for long-term health impact assessments. However, it was pointed out by an NGO participant that continuity of monitoring should not prejudice the capacity to adopt new sites that are more reliable, with modeling as a solution to assess whether all sites are located representatively. An important regulatory gap was noted by a Competent Authority on the assessment of short-term air quality impacts from construction sites. It was suggested that the Ambient Air Quality Directive could mandate Competent Authorities to measure this on a short-term basis where there is a local source, possibly using low-cost sensors.

On intervention area 4, which relates to **micro- and macro-scale siting of sampling points**, it was noted that while the main framework for the protection of ecosystems lies within the National Emissions reduction Commitment Directive, it is important that any monitoring network design criteria for the impact assessment on public health is aligned with those for ecosystem protection. The European Commission will consider how ecosystem protection can be integrated within the Impact Assessment work programme.

Regarding **data quality** (fifth set of interventions), there was consensus on the importance of data quality and the establishment of standards to ensure harmonized data quality, which was noted as particularly important for estimating exposure of the population to exceedances, especially on a fine scale. It was suggested by a national Competent Authority that modelling quality may rely on FAIRMODE's modelling quality objective but that it was also important to check the underlying activity and emissions data at local and regional level .

Several workshop participants (mainly NGOs) made suggestions on which additional air **pollutants should be measured** (intervention area 6), namely: Polycyclic aromatic hydrocarbons (PAHs), allergens, pollen, aerosols / Volatile Organic Compounds, ultrafine particles, black carbon and ammonia. It was also reported that pesticides was an important issue in France.

The use of indicative measurements was further discussed under this intervention area. The value of low-cost sensors in the provision of real time data was highlighted, and that citizen science projects had also demonstrated the value of passive samplers (NO<sub>2</sub> diffusion tubes) in an educational context. Some stakeholders nevertheless noted that low-cost sensors are an additional source of information, but they should not replace reference monitoring stations. Concerns were expressed by several Competent Authorities (both national and regional level) with regards to stability and sensitivity issues, hence participants noted that single sensors should not be used for compliance purposes and that uncertainties must be communicated transparently if such data is used. One national Competent Authority however noted that sensor stability issues could be solved by the time a new Directive comes into force. Finally, it was noted that the CEN/TC 264 working group 42 is currently working on drafting specifications for air quality sensors and test protocols, and there was general consensus that the use of low cost sensors should be harmonized.

Turning to intervention area 7 on **assessment of natural / winter sanding / transboundary contributions**, one NGO representative stressed that as particles from natural sources are also harmful to health, there is no medical justification for derogation. It was also noted that the new WHO guidelines highlighted the importance of high pollution days from Saharan dust for example, and when these occur, public information alerts should be issued to reduce personal exposure.

Intervention area 8 considers interventions on guidance related to **air quality plans**. One NGO representative expressed full support for this intervention area, and one national Competent Authority especially stressed the need for guidance on how to develop air quality plans in order to reduce the administrative burden. It was noted by a national Competent Authority that the time needed to fully assess measures was long, and while guidance may assist, the time-consuming nature of these tasks affects the ability to adopt measures as quickly as possible. Moreover, improved guidance on how to establish an air quality network was advocated by consultancies and an NGO. Finally, one national Competent Authority stated that the Ambient Air Quality Directive or the relevant CEN standards could provide guidance on how to handle the site- and season-dependent response of automatic suspended particulate matter analysers.