FIT FOR FUTURE Platform Opinion

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	2021 AWP
	Directive 2008/50/EC and Directive 2004/107/EC *Legal reference*
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	☐ Fitness check of the Ambient Air Quality Directives (SWD(2019) 427) *Title of the (ongoing) evaluation*

Conclusion of the fitness check concerning: Simplification and burden reduction potential

The fitness check evidenced a number of provisions of the AAQ Directives that have become redundant since 2008, meaning that they have been exhausted or have lost relevance. Whereas these provisions are no longer necessary, they do not affect the implementation of the other provisions of the AAQ Directives.

When it comes to monitoring and its costs, the AAQ Directives are designed in a way to decrease the burden associated to fixed monitoring stations depending on the observed levels of air pollutant concentrations. In other words, as air pollution decreases, so do the minimum monitoring requirements. This means that the proportionality of the monitoring costs is ensured by the very design of the AAQ Directives.

The same cannot be said for the reporting requirements of the AAQ Directives, which are extensive and not decreasing as a function of air pollutant levels. However, the removal of any of the reporting requirements in the AAQ Directives would involve a change in the structure of e-reporting and would thus require further assessment of the broader consequences and administrative burden implications of such changes. Redundant provisions have been identified in the AAQ Directives as well as

elements that could reduce administrative burden in terms of air quality reporting.

Overall findings of the Fitness check concerning efficiency:

The AAQ Directives spell out the clear criteria for determining minimum numbers of sampling points, for data quality and acceptable uncertainty in monitoring and modelling, as well as for macroscale and microscale siting of sampling points. These criteria set limits to the flexibility that Member States have in setting up their respective air quality monitoring regimes, but within these limits leave the establishment and maintenance of the network to national, regional or local authorities. This flexibility ensures that siting of sampling points is based on local expertise.

Over time, this has guided the build-up of an effective air quality monitoring network across the EU which, by and large, adheres to the provisions of the AAQ Directives, and ensures that reliable and representative air quality measurements and data are available. The key challenge here is to ascertain that air quality sampling points indeed provide information both for where the highest concentrations of air pollutants occur as well as for other areas which are representative of the exposure of the general population.

Some stakeholders question the comparability of the data provided by sampling points in different locations, as the spatial representativeness of measurements may vary considerably even on small scales (i.e. tens of meters) for some pollutants, notably nitrogen dioxide. Meanwhile, the European Court of Auditors has expressed concerns that air pollution might be underestimated, if not monitored in the right places.

On balance, this fitness check found that air quality information collected and reported is effective and delivers air quality data that is robust and reliable enough to act upon. In terms of efficiency, the information entails relatively low per capita administrative burden.

There are some indications that efficiency could be improved in Member States, relating to different governance approaches. It is worth noting that the monitoring requirements depend on the number of air quality zones designated, the population in these zones, as well as on whether pollution levels are above specific assessment thresholds defined in the AAQ Directives. Simply put: less pollution, or less people living in an area, will require less monitoring and thus lower monitoring costs.

		The successful establishment and operation of a Europe-wide e-reporting database during the past decade (based on standardised and machine-readable reporting formats) will allow further improvements in the way information is reported, quality assured and made accessible, but may require detailed additional (future) guidance on reporting of air quality information (for example as regards air quality modelling).
	☐	Included in Annex VI of the Task force for subsidiarity and proportionality
		No
	☐	Other
		No
Have your say: Simplify!	*No relevant suggestions on this topic were received from the public.*	
Commission follow up	REFIT Scoreboard:	Revision of EU Ambient Air Quality Legislation
	Have your say portal:	Air quality - revision of EU rules
	Annual Burden Survey:	The EU's efforts to simplify legislation

SUGGESTIONS SUMMARY

1. Improve air quality monitoring networks to diminish discrepancies and enhance comparability across Member States; improve design of air quality plans and promote local/regional level action.
2. Modernise air quality standards and supplement limit values with regional exposure reduction targets.
3. Extend monitoring to pollutants not currently covered by the Ambient Air Quality Directives such as Ultrafine Particles, black carbon and other components of PM, metals, and ammonia.
4. Enhance the coherence with EU legislation, including urban and road transport, energy efficiency and climate.
5. Address emission sources such as tyre and brake wear, non-exhaust traffic related particles, heavy goods vehicle refrigeration units, heating and power emissions and wood burning.
6. Reinforce the governance across levels of government to improve the effectiveness of the AAQD.
7. Simplify the legislative framework by bringing together directives 2008/50/EC and 2004/107/EC in a single directive.

SHORT DESCRIPTION OF THE LEGISLATION ANALYSED

The Ambient Air Quality Directives define common methods to monitor, assess and inform on ambient air quality in the European Union, and establish objectives for ambient air quality to avoid, prevent or reduce harmful effects on human health and the environment as a whole.

In November 2019, the Commission published a Fitness Check of the Ambient Air Quality Directives. It concluded that these Directives have been partially effective in improving air quality, but not fully effective, and not all their objectives have been met. It concluded that the remaining gap to achieve air quality standards is too wide in certain cases.

The Fitness Check outlined seven lessons learnt:

(1) Air quality remains a major health and environmental concern;

(2) Air quality standards are instrumental, and partially effective, in reducing pollution;

(3) Current EU standards are less ambitious than scientific advice;

(4) Limit values have been more effective than other types of air quality standards;

(5) Legal enforcement action by European Commission, and civil society, is an effective tool;

(6) There is scope to further harmonise monitoring, modelling, and air quality plans;

(7) Not all reported data is equally useful, e-reporting allows for further efficiency gains.[1]

[1] Source: Inception Impact assessment;

PROBLEM DESCRIPTION

Clean air is essential to human health and for sustaining the environment. Despite significant reductions of harmful air pollutant emissions over the past three decades, the latest estimates still point to around 400.000 premature deaths each year due to air pollution in Europe. Eutrophication limits are being exceeded in 62% of ecosystem areas and in 73% of Natura 2000 areas across the EU territory. Air quality continues to be a major health and environmental concern to the citizens of the EU: almost half of the respondents to a Eurobarometer survey highlighted 'air pollution' as one of the two most important environmental issues, next to climate change. Furthermore, improved air quality in certain locations due to temporary measures taken to address the COVID-19 pandemic has caught the public's attention.

The main challenges and opportunities related to the Ambient Air Quality Directives can be grouped into the following areas:

(1) EU air quality standards allow higher air pollutant concentrations than is scientifically advisable: EU air quality standards have been set in the Ambient Air Quality Directives for 13 air pollutants: sulphur dioxide, nitrogen dioxide and nitrogen oxide, particulate matter (PM10, PM2.5), ozone, benzene, lead, carbon monoxide, arsenic, cadmium, nickel, and benzo(a)pyrene. For several air pollutants, these standards are not as stringent as recommended by the World Health Organization (WHO) 'Air Quality Guidelines.'[2] A growing body of scientific evidence points to serious adverse health effects at concentration levels lower than those set by the EU air quality standards, most notably for fine particulate matter (PM2.5) and Nitrogen dioxide (N02). The gap in ambition is particularly large for particulate matter (PM), notably for the smaller fraction of PM2.5, where the current EU limit value already exceeded the previous WHO guideline by a factor of 2.5.

(2) There is scope to further improve the health of EU citizens by setting standards for currently non-regulated pollutants[3] that there is scientific evidence showing they are harmful to human health and the environment. Following review of the available evidence these are UFP, Black carbon and other components of PM, various metals, and ammonia.[4]

(3) There is scope for further improvements to the air quality plans[5] **(e.g. in relation to addressing sources of pollution currently falling outside the scope of legislation)**

As scientific evidence emerges, it is now understood that it would be necessary to expand the scope of EU air quality rules to address pollution from emission sources, such as:

- automotive brake and tyre wear in road transport

2 The 2005 recommendations from WHO were updated on 22 September 2021: What are the WHO Air quality guidelines?. Evidence suggests the new WHO air quality guidelines, if met globally would lead to an 80% reduction in premature deaths globally and potentially 66% reduction in Europe (EEB);
3 Fitness check;
4 UA Partnership on air quality 2018 and WHO Guidelines 2021;
5 Urban Agenda Air Quality partnership, Action Plan, 2018;

- construction sites that fall outside the scope of the Non-Road Mobile Machinery regulations
- non-Sulphur missions by ships and a lack of international standards governing shore-side electrical power
- mobile refrigeration units

(4) There is scope to better support local authorities in achieving cleaner air through strengthening air quality monitoring, modelling and plans: The Ambient Air Quality Directives have guided the establishment of a robust system for air quality assessment and have framed competent authorities' action to achieve cleaner air via air quality plans. However, the criteria on monitoring could be further clarified to reduce ambiguity and increase the comparability of air quality data. Also, air quality models have improved but they are not yet used to their full potential due to the lack of common modelling standards. In addition, air quality plans have not always lived up to the requirement to ensure compliance with the EU air quality standards.

(5) **There is a need to ensure better governance and coherence with sectoral policies so that they support rather than hamper air quality**. Air quality objectives should be fully reflected in EU emission source legislation and in the design of new sectoral initiatives under the European Green Deal, including on smart mobility, smart sector integration, renewable energy, renovation of buildings, residential heating, agriculture and industry, and energy production.

The European Green Deal announced in the framework of its zero pollution ambition for a toxic-free environment, that the Commission would draw on the lessons learnt from the Fitness Check and strengthen provisions on monitoring, modelling and air quality plans in order to help local authorities achieve cleaner air, as well as align EU air quality standards more closely with World Health Organization (WHO) recommendations.

This draft opinion therefore addresses the five areas mentioned above related to policy coherence, modernisation and efficiency of the directives – all essential aspects of making the directives fit for ensuring better air quality in the future in Europe.

(Source: Inception Impact assessment)

(Ongoing public consultation: Q3-2021)

The Fit for Future Platform has acknowledged the issues raised by the legislation concerned as follows:

Regarding: modernisation and future proofing of existing laws, including via digitalisation, the efficient labelling, authorisation and reporting obligations, the simplification of EU legislation:

- Digital measurement tools and new ways of working with open and big data can have a critical impact on monitoring air quality standards in Europe. Issues to consider relate to the quality of the data, accessibility and how data can also be used to empower people to take action for better air quality where they live.

If relevant, specific issues on the local and regional level:

The specific issues encountered at local and regional level are:

- See for example point (4) above and RegHub's Implementation report on air quality: report-consultation-02-air-quality.pdf (europa.eu) (2019)
- Air pollution in cities and regions doesn't respect administrative boundaries of a territory or the legal limitations of a specific directive. The challenges in terms of meeting air quality requirements and implementing EU legislation will therefore often not only relate to the specific text of a directive, but also to what is not included in that directive, to pollutants for which there are no requirements and to sources of air pollution which are coming from outside the area and control of the city or region.
- See also suggestion 6 below.

SUGGESTIONS

Suggestion 1: Improve monitoring to reduce discrepancies

Improve monitoring networks to diminish discrepancies and enhance comparability across Member States; improve design of air quality plans and promote local/regional level action.[6]

Description: Data collected from case studies and the stakeholder consultations have pointed to certain aspects of the AAQ Directives where Member States have a wide margin of discretion which hampers comparability. In particular, the use of air quality modelling techniques is highly variable, and not all Member States report the results of modelling in their assessments. There are also inconsistencies in the use of indicative measurements, and the selection of monitoring station types (traffic, background) to be installed to achieve the minimum number of sampling points in a zone or agglomeration. Existing requirements make it difficult to set new monitoring sites.

It would be useful for the revised directive to rethink these requirements for placing monitoring and to develop guidelines for modelling. Additional guidelines and clearer requirements may

[6] European Commission, (2019). Fitness Check report: Commission Staff Working Document (SWD(2019) 427;

help to make ambient air quality assessment and management more effective and efficient and further harmonize monitoring approaches. Still, some flexibility must be granted considering different conditions existing in Member States.

With due attention to not increase costs or create additional administrative burden related to monitoring and reporting, suggestions for modernising monitoring could include to:

- Change the focus and emphasis to more harmful PM2.5 particles without necessarily increasing the total number of PM monitoring sites by, for example, increasing the minimum number of PM2.5 stations and seting clearer requirements for the proportion between different types of monitoring stations.
- Introduce definitions of different types of monitoring stations.
- Require installation of monitoring stations for ultra-fine particles, black carbon and ammonia.
- Provide clearer requirements for the content, publication and review of the documentation of network design and site locations.
- Encourage and support a more regular use of models and indicative measurements to support information from fixed sampling points. Seek to introduce reference methods for modelling and indicative measurements, with due flexibility.

In addition, making the most of new digital tools, the increased use of sensors and open data could become a game changer in monitoring air pollution, traffic management, personal exposure and health assessment.[7] There are now many lower cost sensors available to be of use to cities and policy makers if they are used in a supplementary way to the monitoring stations. To be effective, however, it requires a larger network of low-costs sensors in combination with accredited measurement stations. To fully ensure the reliability and comparability of data collected through low-cost sensors, it would also be necessary to in the short-term work towards minimum data accuracy requirements, good data management practices and in the medium terms towards standardisation and type approval regulation. Before reviewing the directive, it would be useful to review the data and research available to conclude the parameters and conditions within which sensors can be useful and reliable tools to improve air quality.

Also, the competent national authorities could make available air quality monitoring data in real time in order to improve local air quality plans. Opening data collected through accredited measurement stations and making them publicly available, can empower local business and citizens to act for pollution reduction. Similarly, when low-cost sensors can be used directly with and by citizens to measure the air quality in the areas where they live and work, they have the potential to increase awareness about the local air quality challenges and influence behavioural choices. There are however also challenges related to data protection an ensuring that all citizens have opportunities to use such tools to be considered.[8] Also, it would be important to ensure that the information from the sensors is only used for information and action related to air quality.

Improved collection, comparability and use of data could encourage Member States and local/regional authorities to adopt a continuous improvement approach to sources of PM, NOx and other pollutants, including improving the design and implementation of air quality plans as

7 WHO, (2015). Residential heating with wood and coal, Health impacts and policy options;

8 CitiMeasure – Eurocities;

well as the design of the monitoring network.[9] To improve the air quality plans, it would also be useful to strengthen and clarify the requirements in Annex XV concerning minimum content of air quality plans and provide a comprehensive and up-to-date checklist of air pollution abatement measures to be considered during the preparation of air quality plans. It should also be considered to set out clearer requirements concerning the process for the adoption and revision of air quality plans, including requirements on timeframes and public.

Expected benefits:

- Improved comparability among Member States air quality models and measures, i.e. improved coherence of implementation
- Empowerment of citizens and increased awareness raising of local air quality challenges
- Better implementation of air quality policies and standards.

Suggestion 2: Modernise air quality standards

Review air quality standards to reflect latest scientific evidence and supplement limit values with regional exposure reduction targets.

Description:

This section does not pre-empt the outcomes of the Commission's impact assessment of the revised legislative proposals or the forthcoming negotiations between EU's decision-making bodies.

It is widely accepted, and documented in the directives' recent fitness check, that the adoption of the 2008 Ambient Air Quality Directive, setting EU limit values for concentration of certain pollutants, greatly improved Europe's air quality. It is also true that emission reductions have stagnated in recent years and emission concentrations exceed limit values in many hotspots in nearly half of the Member States. The effects of various atmospheric pollutants are not only related to emission sources, they are also influenced by weather and wind conditions (e.g. persistence of pollutants in the air in the Po Valley). To address this persistence of harmful to human health pollution sectoral measures can be applied (e.g. tackling transport emissions, energy production and energy consumption emissions, etc); as well as aligning the pollutant limit values to the latest scientific evidence hence giving a renewed push for improving air quality in the EU.

A growing body of scientific evidence points to serious adverse health effects at concentration levels lower than those set by the EU air quality standards, most notably for fine particulate matter (PM2.5).[10] The European Green Deal (COM(2019) 640 final and the Zero Pollution

[9] European Commission, (2019). Fitness Check report: Commission Staff Working Document (SWD(2019)427);

[10] According to the European Environment Agency's 2020 report, 'air pollution is a major cause of premature death and disease and is the single largest environmental health risk in Europe' (WHO, 2014, GBD 2016 Risk Factors Collaborators, 2017; HEI, 2019) responsible for around 400 000 premature deaths per year in the EEA-39 (excluding Turkey) as a result of exposure to PM2.5. Heart disease and stroke are the most common reasons for premature deaths attributable to air pollution, followed by lung diseases and lung cancer (WHO, 2018b). The International Agency for Research on Cancer has classified air pollution in general, as well as PM as a major component of air pollution mixtures, as carcinogenic

Action Plan (COM (2021) 400 final) acknowledge that the high numbers of premature deaths and diseases due to air pollution "can be attributed to the fact that some EU air quality standards are still less stringent than the standards the WHO recommended in 2005."

The WHO published its updated recommendations for air quality standards on 22 September 2021. The review of the AAQDs offers an opportunity to modernise the air quality standards, in view of a progressive closer alignment with the new WHO recommendations and considering the development of scientific evidence over the past years. In addition to public health, environment and climate concerns, the assessment of new binding limit values should factor in aspects such as technology feasibility readiness as well as economic and social sustainability.

Air quality standards in the form of binding limit values have been and will continue to be a key driver for reducing air pollution and improving air quality. The importance of binding limit values was stressed by the Commission in its Fitness Check.[11] Other forms of standards, such as exposure reduction targets or target values, can be useful as a complement to binding limit values. For example, target values can be useful as a temporary step for pollutants that are currently non-regulated (e.g. black carbon and ultrafine particles) - standards for these pollutants could initially be set as target values and eventually become limit values. Target values are probably a realistic option for pollutants, like heavy metal and ozone, which are currently regulated – heavy metals because they are fall under environmental permit procedure and ozone because it is not directly emitted pollutant.

The effectiveness of the existing hot spot approach, which focus on the most polluted non-compliant spots, in reducing the exposure of the general population in cities and the emerging health risk is limited. The hot spot approach makes it hard to select new air quality target levels more closely aligned with the WHO guidelines, which are both feasible for the hot spot areas and sufficiently ambitious to trigger measures in other less polluted regions or parts of an urban agglomeration with still unhealthy levels of air pollution above the (updated) WHO guidelines.

The hot spot approach could be supplemented by for example a regional exposure reduction target. The current AAQD already sets a national exposure reduction target in terms of a percentage reduction within a decade of the PM2.5 background concentration in residential urban areas, spatially averaged over a given number of monitoring sites of a Member State. However, it only applies to entire Member States, who need to take national measures to achieve the required relative pollution reduction. [12]

In order to be more effective, and to stimulate additional measures in polluted regions, it should be considered – subject to careful scrutiny - to further develop the exposure reduction approach

(IARC, 2013a). Furthermore, short- and long-term exposure to air pollution can lead to reduced lung function, respiratory infections and aggravated asthma. Maternal exposure to ambient air pollution is associated with adverse impacts on fertility, pregnancy, newborns and children (WHO, 2005, 2013a). There is also emerging evidence that exposure to air pollution is associated with new-onset type 2 diabetes in adults and it may be linked to obesity, systemic inflammation, Alzheimer's disease and dementia (RCP, 2016, WHO, 2016);

11 Fitness Check of the Ambient Air Quality Directives (SWD(2019)427 final);

12 There are high variation of pollution levels across the EU, with a span reaching from almost 40 µg/m³ PM2.5 in eastern Europe and Northern Italy to less than 20 µg/m³ in most western and northern European Member States (EEA, Air Quality in Europe, 2020). Less pronounced, but still significant are the differences in pollution levels even within the same urban agglomeration, for example between the pavement along a trafficked road and a calm neighbourhood away from traffic and industrial sources;

for larger agglomeration and regions, where the concentrations of PM exceed the (updated) WHO guideline levels. The percentage exposure reduction to be achieved within a given period would be determined depending on the existing exposure levels in each agglomeration measured at a defined number of representative monitoring sites or derived from air quality modelling, or a combination of both. While the limit value would tackle the worst pollution at spots in the first place, the additional regional exposure reduction target would trigger measures – both at national and regional/local level - to ensure a widespread improvement of the air quality towards the guideline levels of the WHO in the most cost-effective way.

Finally, it should be noted that EU and international efforts are key to reduce PM2.5 emissions at a global level, including emissions from shipping and agriculture, amongst others.[13]

Expected benefits:

- Fewer deaths and hospital admissions for diseases attributable to air pollution
- Reduction in diseases attributable to air pollution, such as coronary heart disease, lung cancer and dementia[14]
- Local ecosystem improvements
- Air pollution measures can contribute to climate action since some pollutants such as black carbon (BC), a constituent of PM, are short-lived climate forcers that contribute directly to global warming.

Suggestion 3: Modernise the range of pollutants which are monitored

Monitoring of pollutants not currently covered by the Ambient Air Quality Directives such as Ultrafine Particles (PM0.1), black carbon and other components of PM, metals, and ammonia.[15]

Description: The air quality in Europe would greatly improve if certain pollutants, Ultrafine Particles (PM0.1) and black carbon, known to be hazardous, and currently outside the scope of the Directives, were monitored with the view to better understanding the extent of their impact on human health and the environment. Further research on monitoring methods and their availability is needed to ensure the monitoring of these pollutants is technically feasible for routine monitoring.

Particles can be carried over long distances by wind and then settle on ground or water. Depending on their chemical composition, the effects of this settling may include making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; affecting the diversity

13 Through effective implementation of the Long-Range Transboundary Air Pollution Convention and related Protocols;

14 For example, London's Urban Low Emission Zone showed a reduction of around one in every four air pollution related diseases, after the first year of implementation: www.london.gov.uk/press-releases/mayoral/ulez-to-save-billions-for-nhs

15 Urban Agenda Air Quality Partnership, (2017). Action plan, and European Commission, (2019). Fitness Check report: Commission Staff Working Document (SWD(2019)427);

of ecosystems; contributing to acid rain effects; stain and damage stone and other materials, including culturally important sites

The Directives should strengthen the obligation of monitoring the major components of PM such as nitrate, sulphate and organic compounds, to study their impact on human health and the environment. They should be broadened to introduce monitoring of new pollutants emerging from the introduction of biofuels and/or SCR technologies, such as aldehydes and cyanides to establish a common understanding of the level of their hazardous potential.

As there are no WHO guidelines at this point related to those pollutants it would be premature to set binding reduction targets (limit values) until further research has been conducted. Still, existing scientific evidence raises concerns over the impact of the components of particulate matter, in particular black carbon (an important short-lived climate pollutant), ammonia (a direct result of agriculture practices) and ultrafine particles, which compared to fine particles (PM2.5) cause more pulmonary inflammation and are retained longer in the lung.

Finally, a holistic review of the monitoring requirements for all pollutants should be carried out, to prioritise which pollutants need to be retained, taking into consideration the current concentration levels (for example very low levels of carbon monoxide).

Expected benefits:

- Future proofing the legislation by ensuring a better understanding the impact of all the components of pollutants as well as the impact of new sources of pollution
- Improved human health as described above, which would lead to a reduction of public health costs
- Environmental protection by avoiding the side effects mentioned above.

Suggestion 4: Policy coherence – air and climate

Ensure coherence with EU legislation,[16] including urban and road transport, renewable energy and agricultural policies.

Description: Effective clean air policy requires a systemic and integrated approach, which is regularly evaluated, with other environmental policies and with all other relevant policy areas, including EU emission source legislation, such as climate, industry, energy, transport and agriculture and which makes better use of synergies between all policy areas, making use also of the opportunities offered by the circular economy, while avoiding trade-offs.

Broadly speaking, the EU CO2 emissions reduction targets are coherent with the objectives of the AAQ Directives.[17] It is however important to ensure that also source policy and implementation of

16 Council conclusions, 6650/20;

17 The Fitness Check showed that climate and air can have a positive or negative effect on each other's policy objectives depending on the measures adopted. Air pollutants and greenhouse gases originate from the same sources, such as industrial installations and fossil fuel combustion in transport and energy generation. Some ambient air pollutants have a climate-forcing impact and are important greenhouse gases – these include the 'black carbon' component of particulate matter and ozone and its precursors, particularly methane. Sulphur dioxide, on the other hand, has a short-lived cooling effect while nitrogen dioxide, has both a cooling and a warming effect and is thought to have a net, short-lived cooling effect. In other cases, the specific effects of certain ambient air pollutants on climate are not yet fully understood – for

these measures are coherent with air quality policy. When this is not the case, implementing air quality provisions become ineffective, more costly and more burdensome than necessary for Member States, regional and local authorities.

Therefore, air quality objectives should be fully reflected in EU emission source legislation and in the design of new sectoral initiatives under the European Green Deal, including on smart mobility, smart sector integration, renewable energy, renovation of buildings, residential heating, agriculture and industry, and energy production. More precisely, this could include:

1. Accelerating the switch to low- and zero-emission vehicles by setting a phase out plan for the most polluting vehicles in urban areas across the EU[18] and deploy digital and ITS solutions that would facilitate this transition (road transport);[19]
2. Prioritising the investment in public transport infrastructure including safe cycle lanes and promotion of active mobility. Rethink urban mobility and commuting to/from urban areas in the post-Covid era, for example 'smart working' which reduces transport needs;
3. Incentivising the use of renewable energy with lower air quality impact and with due attention to balancing land use and soil consumption for agricultural purposes.

Also, the overall policy and legislative documents for the Common Agriculture Policy (CAP) now incorporate environmental protection in their objectives and give the environment greater attention than previously. The second pillar of the CAP provides a funding opportunity for the implementation of air quality measures (through focus area 5D) and thus supports the AAQDs' objectives. The first pillar also includes certain measures to reduce ammonium, which should be reinforced in the forthcoming CAP programming period to ensure a specific focus on air quality at objective level.[20]

The Ambient Air Quality Fitness Check found that the EU's energy and climate policies have overall supported the improvement of air quality. It is essential that any new energy efficiency and emission requirements under the Eco-design Directive, including for heaters and boilers, and new EU sustainability criteria under the Renewable Energy Directive, the reform of the Common Agricultural Policy (CAP) as well as the national air pollution control programmes (NAPCPs), the new post-EURO VI/6 standards and the national energy and climate plans (NECPs), contribute to continued coherence and synergies, while avoiding trade-offs, such as in the case of biomass use for both residential heating and medium-sized combustion installations.

example, while the negative impact of black carbon on both air quality and climate change is well understood, the effect on the climate of other components of particulate matter emitted from, for example, biofuel combustion, is less clear;

[18] Reuters, (10/3/2021). reports that 9 countries: Austria, Belgium, Denmark, Greece, Ireland, Lithuania, Luxembourg, Malta and the Netherlands have written to the Commission asking to set a date by which sales of diesel vehicles will be phased out. https://www.reuters.com/business/sustainable-business/eu-needs-phase-out-date-new-petrol-diesel-cars-nine-countries-say-2021-03-10/ . On April 12, 2021, Reuters reported that, a YouGov poll showed, that 63% of EU city dwellers support a 2030 ban on combustion car sales https://www.reuters.com/article/us-eu-autos-idCAKBN2BY0SK

[19] The Commission's proposal for C02 standards for cars and vans, COM(2021)556, proposes a phase out of polluting vehicles by 2035;

[20] European Commission, (2019). Fitness Check report: Commission Staff Working Document (SWD(2019)427);

Expected benefits:

- Improved air quality overall, which would reduce public health care costs and premature deaths
- Cost-effective implementation of air quality measures
- Reinforced credibility of EU policies
- Improved social interactions/wellbeing as lesser destruction of social fabric by barriers created by road traffic
- Support job creation in the bicycle sector and bicycle repairs sectors, which is a growing source of urban employment
- There will also be benefits in reduced noise pollution from reduced traffic (and particularly fossil-fuel driven vehicles). Noise is the second largest environmental cause of health problems.

Suggestion 5: Policy coherence - close the gaps on emission sources

Address emission sources such as tyre and brake wear, non-exhaust traffic related particles, heavy goods vehicle refrigeration units, heating and power emissions, agriculture and wood burning.[21]

Description: EU source legislation sets emission limits for vehicles (EURO standards) and non-road mobile machinery, for energy efficiency, for industrial emissions, for product efficiency (eco-design directive), and for fuel standards (including the sulphur content of certain liquid fuels mostly addressing SOx from maritime transport, and the Fuel Quality Directive addressing air pollution from the road transport setting additional fuel quality parameters).[22] However, as raised in the recent Fitness check of the Ambient Air Quality Directive[23], there are currently emissions from sources for which there is no monitoring nor limit values.

The Green Deal's commitment to 'do no harm' and the zero-pollution ambition set out in the Zero Pollution Action Plan is accelerating the deployment and adoption of less polluting vehicles, fuels, products, and industrial activity to increase policy coherence by closing the regulatory gaps.

Exhaust and non-exhaust sources[24] contribute almost equally to total traffic-related PM10 emissions. Brake, tyre and road wear along with road dust resuspension have been recognized as the most important non-exhaust traffic related sources, with their relative contributions to non-exhaust traffic related emissions ranging between 16-55% (brake wear), 5-30% (tyre wear) and 28-59% (road dust resuspension). Brake wear contribution to traffic-related PM10 emissions is much lower in freeways due to significantly reduced number of braking events, while tyre wear contribution is much higher in areas where studded tyres are used. Issues to address are:

21 Air quality in Europe - 2020 report — European Environment Agency (europa.eu) (incl. p. 36, fig. 3.4 and 3.5);

22 A proposal for a UN Global technical regulation on brake wear emission is under consideration by the UN World Forum for Harmonization for Vehicle Regulations. In addition, a Commission proposal setting EURO7/VII standards for vehicles is expected to be adopted by the end of 2021, beginning of 2022;

23 European Commission, (2019). Fitness Check report: Commission Staff Working Document (SWD(2019) 427);

24 Grigoratos T., Martini G., (2014). Non-exhaust traffic related emissions. Brake and tyre wear PM, Literature review;

- Research needs to establish the organic constituents of tyre and brake PM10, to understand the generation mechanisms and study the properties of those particles.
- Reduction of the number of sampling methodologies (which include a wide range of applied speeds, accelerations and decelerations) which very often result in non-comparable and in some cases even contradictory results.
- 'Real world' motoring alignment of modelling to take into account conditions such as underinflated tyres, the road surfaces and the budget range of tyres.

The AAQD Fitness Check showed that ammonia emissions, which are a precursor for particulate matter, have decreased considerably less than other emissions in the past decade inter alia due to a lack of specific source legislation. Further improvements designed to address ammonia from agriculture would be the single necessary action to reduce ammonia. This would align measures with the Farm to Fork strategy. Measures to mitigate ammonia are available as well as technically and economically viable.

The WHO reports[25] that across Europe and North America, central Europe is the region with the highest proportion of outdoor PM2.5 that can be traced to residential heating with solid fuels (21% in 2010). Each year 61 000 premature deaths are attributable to ambient air pollution from residential heating with wood and coal in Europe. Encouraging fuel switching (away from coal and other solid fuels) and use of more efficient heating technologies such as certified fireplaces, pellet stoves and the use of better fuels, including certified wood, can reduce the emissions from residential wood and coal heating devices. Alternative measures that could be considered are heater and wood stove exchanges or district heating.

Expected benefits:

- Aside from the human and environmental benefits that improved air quality will bring about, controlling emissions from all polluting sources will decisively contribute to the fulfilment of the EU's Zero Emission Action Plan and ultimately the EU Green Deal
- Reducing pollution from emission sources will lead to a more cost-effective implementation of air quality provisions and reduced public health care costs for diseases related to air pollution.

Suggestion 6: Policy coherence: effective governance of the AAQDs

Ensure coherence of action between different levels of governance to improvement the effectiveness of air quality measures and the implementation of the AAQD.

Description: The Council has highlighted[26] the need to ensure coherence of action between different levels of governance, in addition to between sectors, to improve air quality.

The governance structure of a future AAQ Directive is of high importance for its effectiveness. Under the current AAQ Directives, Member States and their regions are responsible for compliance

25 WHO (2015). Residential heating with wood and coal, Health impacts and policy options;
26 Conclusions at its 3754th meeting held on 5 March 2020;

with limit values set by the directive and implementation actions are often focused at local level (urban areas). However, air pollution can often only be reduced slightly by local measures alone:

- A large share of emission sources causing high local concentrations is often outside jurisdiction of responsible entity.
- Emission source legislation, as e.g. for vehicles or installations, is now to a larger degree adopted and fully harmonized on EU level.
- Local authorities have few instruments to improve air quality, including e.g. driving bans or a ban to use solid fuel installations in private households.

EU institutions, Member States, regions and local governments must cooperate and take the necessary measures at all levels to enable the collective achievement of maintaining and improving air quality, taking into account cost-effectiveness in achieving this objective. Proportionate and effective measures at national, regional and local levels will be necessary to contribute to meeting the EU air quality standards. Based on the example of the new EU climate law[27], in a future AAQD both the EU institutions and the Member States, within their respective competences, should move forward in joint political and legal responsibility to achieve compliance with future limit values.

Similar to the EU climate law, the new AAQD could also include aspects related to public participation, with a commitment from the Commission to facilitate an inclusive and accessible process at all levels, including at national, regional and local level and with academia, the business community, citizens and civil society, for the exchange of best practice and to identify actions to contribute to the achievement of the objectives of the directives.

Each Member State could establish a multilevel air quality dialogue pursuant to national rules, in which local authorities, civil society organisations, business community, investors and other relevant stakeholders and the general public are able actively to engage and discuss the achievement of reducing air pollution for a better public health, while taking into account concerns for socio-economic activities.

Expected benefits:

- An effective implementation of the directive at the various levels with the aim of timely compliance with future limit values - regardless of the formal ultimate responsibility for compliance
- Legal and planning security
- The potential to reduce costs associated with the measures, as those affected by the measures can be granted longer transition periods.

[27] Article 2 of the Climate Law reads: “The relevant Union institutions and the Member States shall take the necessary measures at Union and national level, respectively.” Recital 40: "Climate change is by definition a trans-boundary challenge and coordinated action at Union level is needed to effectively supplement and reinforce national policies”;

Suggestion 7: **Merge directive 2008/50/EC on ambient air quality and cleaner air for Europe and** 2004/107/EC **relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air**

Simplify the legislative framework by bringing together the current Ambient Air Quality Directives in a single directive.

Description: Merging the two directives (2008/50/EC and 2004/107/EC) would be advisable to avoid the overlapping requirements in the two separate directives. In directive 2004/107/EC most of the pollutants are measured in PM10 whereas measurements of PM10 are described in the 2008/50/EC directive. Hence measurements of PM10 are described directly in directive 2008/50/EC and indirectly in 2004/107/EC.

To make matters more complex, some annexes of the both directives were amended by a third directive: 2015/1480 directive laying down the rules concerning reference methods, data validation and location of sampling points for the assessment of ambient air quality.

Overlapping requirements or sometimes contradictory for PM measurements and its components are noticeable in annex III of directive 2008/50/EC and annex III of directive 2004/107/EC regarding location of stations.

Examples (requirement regarding location of stations that can measure PM and pollutants in PM at the same time):

2008/50/EC:

"Where contributions from industrial sources are to be assessed, at least one sampling point shall be installed downwind of the source in the nearest residential area. Where the background concentration is not known, an additional sampling point shall be situated within the main wind direction;"

"- the flow around the inlet sampling probe shall be unrestricted (in general free in an arc of at least 270° or 180° for sampling points at the building line) without any obstructions affecting the airflow in the vicinity of the inlet (normally some metres away from buildings, balconies, trees and other obstacles and at least 0,5 m from the nearest building in the case of sampling points representing air quality at the building line)"

"— in general, the inlet sampling point shall be between 1,5 m (the breathing zone) and 4 m above the ground. Higher siting may also be appropriate if the station is representative of a large area and any derogations should be fully documented"

2004/107/EC:

"Where contributions from industrial sources are to be assessed, at least one sampling point shall be installed downwind of the source in the nearest residential area. Where the background concentration is not known, an additional sampling point shall be situated within the main wind

direction. In particular where Article 3(3) applies, the sampling points should be sited such that the application of BAT can be monitored."

"- the flow around the inlet sampling probe should be unrestricted, without any obstructions affecting the airflow in the vicinity of the sampler (normally some metres away from buildings, balconies, trees and other obstacles and at least 0,5 m from the nearest building in the case of sampling points representing air quality at the building line);

"—in general, the inlet sampling point should be between 1,5 m (the breathing zone) and 4 m above the ground. Higher positions (up to 8 m) may be necessary in some circumstances. Higher siting may also be appropriate if the station is representative of a large area".

Overall, the variety of limit values, target values and other thresholds like national exposure reduction target, exposure concentration obligation, average exposure indicator for one pollutant – particulate matter, as well as separate measurements for fraction PM10 and for fraction PM2.5 is already complex and costly to manage. Adding further requirements for PM10, PM2.5, components of PM10 and components of PM2.5 to this extensive system must go hand in hand with considerations for limiting cost increases.

Expected benefits:

- Reduce the administrative burden and costs in the implementation of the air quality measures.

ABSTENTIONS

- 2 Member States

DISSENTING VIEWS

Rationale for dissenting views on the suggestions:

It remains unclear whether the suggestions made in the draft opinion correspond to the objectives and the mandate of the Fit for Future Platform. The suggestions made (proposed in suggestions from 1 to 5) concern amendments of the ambient air quality directives, related to introducing new monitoring approaches, to establishing new norms, to expanding the pollutants covered by the directives, including suggestions for additional monitoring of pollutants, for which such monitoring has not been conducted so far, to addressing additional emission sources. These are extremely serious issues and they can lead to serious consequences – ecological, social and economic.

In point 2 it is proposed to "Modernise air quality standards and supplement limit values with regional exposure reduction targets" (the exposure of the population to the harmful impact of ambient pollutants). The latter can be interpreted as setting more liberal requirements in the places where due to various reasons (including natural) higher levels of a given pollutant are registered. But it can also mean setting targets for our country that will not only be extremely difficult to achieve, but will also require spending significant resources.

Commission's specific legislative proposals will be subject to examination and discussion under the respective procedures by the Commission's services and the Member States, accompanied by an Impact Assessment. The latter should provide an answer to a number of highly significant questions that will justify the respective amendments in the legal framework.

ANNEX

Position of the Polish Ministry of Climate accompanying the draft opinion on ambient air quality (2021_SBGR1_04) in the context of the Fit for Future Platform work

Poland conditionally supports a gradual process of change, including the tightening of the current rules, within the framework of Directive 2008/50/EC, including air quality standards, as long as this process is carried out taking into account the vital citizen's interests of EU Member States, i.e. socio-economic conditions. It should to be done gradually and respecting social problems ultimately no earlier than 2040. The process should not impoverish certain groups of citizens and should not increase the problem of "economic poverty" and "energy poverty" or "social exclusion", the elimination of which is one of the important actions resulting from EU law.

It is worth mentioning that the majority of Member States do not meet the current air quality standards for fine dust - around 17 and a dozen for nitrogen oxides. Therefore, when conditions become more severe, the situation will significantly worsen. Poland is of the opinion that in order to enjoy a clean environment, including clean air, at first the basic people's needs should be met.