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COMMISSION STAFF WORKING DOCUMENT
EXECUTIVE SUMMARY OF THE FITNESS CHECK
of the

Ambient Air Quality Directives

Directive 2004/107/EC relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air

and

Directive 2008/50/EC on ambient air quality and cleaner air for Europe

{SEC(2019) 426 final} - {SWD(2019) 427 final}

EXECUTIVE SUMMARY

Clean air is essential to human health. It is also essential to sustaining the environment, and provides multiple economic and social benefits. The scientific evidence of harmful effects of air pollution is well-established, robust and points to a clear need for action.

The current Ambient Air Quality (AAQ) Directives constitute the third generation of EU level air quality policies since the early 1980s, and have inherited many provisions, including many air quality standards from predecessor legislation. These policies have rendered some successes, as exemplified by the decrease of exceedances for most air pollutants over the past decade. However, the air quality challenge is far from being solved. Although the number of people exposed to air pollution decreased markedly during the past decade, persistent exceedances above EU air quality standards remain for several air pollutants, and especially for particulate matter, nitrogen dioxide, ozone and benzo(a)pyrene – with significant impacts on human health and the environment. In 2017, for example, 8% of the EU urban population was exposed to levels above the EU air quality standards for fine particulate matter (PM_{2.5}); but when measured against the more stringent recommendations by the World Health Organization this figure increased to around 77%.

With the AAQ Directives, and in combination with the wider EU Clean Air Policy Framework, the European Union has the policy tools at hand to address this challenge. This fitness check, including the analysis of its underlying evidence and stakeholder views, concludes that the AAQ Directives have been *partially effective* in improving air quality and achieving air quality standards. It also acknowledges that they have not been *fully* effective and not all its objectives have been met to date, and that the remaining gap to achieve agreed air quality standards is too wide in certain cases.

Clear EU air quality standards – Air quality standards have been set for a total of 13 air pollutants: sulphur dioxide, nitrogen dioxide and nitrogen oxides, particulate matter (PM₁₀, PM_{2.5}), ozone, benzene, lead, carbon monoxide, arsenic, cadmium, nickel, and benzo(a)pyrene. Their relevance and the underpinning scientific evidence on their harmful effects has been reconfirmed and reinforced. For other air pollutants, not covered by the AAQ Directives, such as ultrafine particles or black carbon, the current scientific evidence on adverse health effects remains inconclusive and does not lend itself to setting standards. The air quality standards have been instrumental in driving concentrations downward and reducing exceedance levels. Nevertheless, two contradictory shortcomings remain: firstly, EU air quality standards are not fully aligned with well-established health recommendations (and they do not feature an explicit mechanism for adjusting air quality standards to the latest technical and scientific progress);¹ while secondly, due to insufficiently effective air quality plans and lack of commitment to take appropriate measures by Member States, there have been and continue to be substantial delays in taking appropriate and effective measures to meet the air quality standards. Thus, while the number and magnitude of exceedances above air quality standards has decreased over the past decade, it is also clear that they have not been kept as short as possible to date.

A representative high-quality monitoring of air quality – Across the EU, Member States have established an air quality monitoring network with some 16 000 sampling points for

¹ The WHO Guidelines are currently under revision with an expected publication date in the early 2020s, the Commission is following this process closely.

specific pollutants (often grouped at more than 4 000 monitoring stations) based on common criteria defined by the AAQ Directives. This extensive network can be considered a success in itself. Concerns have been raised that the criteria on monitoring offer too much leeway and present some ambiguity to competent authorities, resulting in instances where air quality monitoring does not live up to the criteria set by the AAQ Directives. A key challenge here is to ascertain that air quality sampling points indeed provide information for where the highest concentrations of air pollutants occur. This, however, does not appear to amount to systemic shortcomings in the EU-wide monitoring network. Overall, the monitoring network by and large adheres to the provisions of the AAQ Directives, and ensures that reliable and representative air quality data is available.

Reliable, objective, comparable information on air quality – The provisions on reporting have prompted the establishment of improved and more efficient e-reporting systems to report both validated air quality data as well as up-to-date data. The air quality data reported by Member States is made available to the public by the European Environment Agency, including via an Air Quality Index based on near-real time data. The AAQ Directives have facilitated the availability and accessibility of objective and comparable air quality data and information across the EU. Further harmonisation of the way air quality information is presented, especially at Member State level, would be possible and provide further EU added value, and help ensure even higher comparability of air quality information across all geographical scales and all regions of the EU.

Action to avoid, prevent, and reduce impact of poor air quality – The AAQ Directives have been only partially, and therefore insufficiently, successful in meeting this objective. While action to reduce the impact of air quality has been taken, resulting in a reduced number and magnitude of exceedances, 20 Member States still report exceedances above EU limit values for at least one pollutant, and often for several. One reason for this is that improvements in air quality critically depend on action taken to address the sources of air pollution, and typically require action in the transport, energy (including domestic heating) and agricultural sectors or by industry. At national, regional and local level, this has not translated in sufficient level of commitment. At the EU-level, synergies with climate, energy and transport policies have been strengthened over the past decade, and require coherent action at national, regional and local levels. Notwithstanding the important shortcoming of the remaining implementation gap to meet the air quality standards for all pollutants and throughout the EU, the clear requirement to take remedial action when and where exceedances are observed has been decisive in triggering improvement in air quality, yet often with delay.

Conclusions – The AAQ Directives have guided the establishment of a representative high-quality monitoring of air quality, set clear air quality standards, and facilitated the exchange of reliable, objective, comparable information on air quality, including to a wider public. They have been less successful in ensuring that sufficient action is taken by Member States to meet air quality standards and keep exceedances as short as possible. Nevertheless, the available evidence indicates the AAQ Directives have contributed to a downward trend in air pollution and reduced the number and magnitude of exceedances.

This partial delivery allows to conclude that the AAQ Directives have been broadly fit for purpose – while at the same time pointing to scope for improvements to the existing framework such that good air quality be achieved across the EU. In particular, it emerges from this fitness check that additional guidance, or clearer requirements in the AAQ Directives themselves, could help to make monitoring, modelling and the provisions for plans and measures more effective and efficient.