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Eurovent feedback on the roadmap for the EU Action Plan Towards Zero Pollution

In a nutshell

The EU Action Plan Towards Zero Pollution must focus on air pollution, indoor air pollution in particular. The dangers of air pollution, both outdoors and indoors, are severe, and more needs to be done to protect the right to clean air. Improving air quality goes hand in hand with decarbonisation, and the HVACR sector has major contributions to make to both.

The dangers of air pollution

The stakes in developing an EU Action Plan Towards Zero Pollution could hardly be higher, given the severity of the risks associated with air pollution.

Air pollution kills. It can enter the lungs and bloodstream, and causes cancer, and lethal cardiovascular and cardiopulmonary diseases¹. Worldwide, air pollution may have a more devastating impact on life expectancy than HIV/AIDS, malaria, cigarette smoking, alcohol and drug use, road injuries, conflict and terrorism².

Air pollution has also been shown to impair cognitive development and learning outcomes in children³, to cause and worsen asthma and allergies⁴, to deteriorate productivity of workers⁵, and to precipitate dementia⁶. There is also mounting evidence that air pollution increases the risk of hospitalisation and death from COVID-19⁷.

Insufficient progress on ambient air pollution

The severity of the impact of air pollution on health and well-being is reflected in the strict WHO air quality guidelines. Yet the European Union's AAQ Directives continue to fall short of the ambitions set by the WHO. The Action Plan must foresee closing the remaining gap.

The Action Plan must also address implementation and enforcement, as Member States continue to fail to meet even the laxer EU requirements, with three new infringement cases and three new cases referred to the ECJ for breaches of the AAQ Directive in 2019.

As a consequence, Europeans continue to be exposed to harmful levels of NO₂, SO₂, PM, benzo(a)pyrene, ozone, and other air pollutants, in spite of improvements. For example, almost three-quarters of the European population still lives in areas that do not meet the stricter WHO air quality guideline for PM_{2.5} of 10µg/m³⁸.

¹ <https://jamanetwork.com/journals/jama/fullarticle/194704>

² <https://dev-aqli-epic.pantheonsite.io/pollution-facts/>

³ <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001792>

⁴ <https://www.aaaai.org/conditions-and-treatments/library/asthma-library/air-pollution-asthma#:~:text=Indoor%20air%20pollution%20leads%20to,indoor%20use%20of%20solid%20fuels>

⁵ <https://www.nber.org/papers/w17004.pdf>

⁶ <https://pubmed.ncbi.nlm.nih.gov/30775976/>

⁷ <https://www.weforum.org/agenda/2020/07/air-pollution-exposure-covid19-cases-deaths-study>

⁸ <https://aqli.epic.uchicago.edu/wp-content/uploads/2020/07/EuropeFactSheetv2.pdf>

Non-anthropogenic air pollution

Besides legislation putting in place limit values for the concentration of certain pollutants in the ambient air, the European Union has also enacted important legislation to prevent air pollution at its sources. Such legislation has its limits however, as not all air pollution is due to human activity.

Around 18% of global urban ambient PM_{2.5} arises from natural sources, including wildfires⁹. Smoke from wildfires, a record number of which have devastated many regions in the world in the past year, can rise many kilometres into the stratosphere and cause air pollution halfway across the globe¹⁰.

Although it tends to go under the radar, radon is another substance of concern which occurs naturally. An odourless, radioactive gas, radon can enter a building through gaps in the building envelope and accumulate. Radon exposure is a leading cause of lung cancer among non-smokers¹¹.

Non-anthropogenic air pollution is not amenable to ambient air quality or emissions control legislation, but its effects on public health are nonetheless severe. This must be reflected in the Action Plan.

Indoor air pollution: the missing link

Air pollution is most concerning when it finds its way to where people are likely to breathe it in – where people live, learn, and work. Europeans spend over 90% of their time indoors, where the air can be as much as eight times more polluted than the ambient air. In fact, ambient air pollution is only one of the many sources of indoor air pollution, which typically includes VOCs, NO₂, PM, and bioaerosols such as viruses, bacteria and mold spores.

Common sources of VOCs include household cleaning and personal care products, but also furniture and air fresheners, among others. Not all VOCs are equally harmful, but most of them react with NO_x to create ground-level ozone, which is certainly harmful¹². NO_x is typically emitted from gas stoves and combustion space heaters, but also from candles and tobacco products¹³. Building occupants themselves, both human and animal, are sources of indoor air pollution as well, emitting bioaerosols, dust particles, and moisture which may support the growth of molds.

Much more emphasis must be put on indoor air pollution if the European Commission is to be serious about its zero-pollution ambition. Developing a regulatory regime on indoor air pollution is complex and there are no silver bullets. However, if not properly tackled at the European Union level, the clean air needs of building occupants and the indoor air quality solutions that can meet them will remain undervalued.

Air quality and decarbonisation

The Action Plan must highlight the intersection between decarbonisation and air quality. Most air pollution comes from the combustion of fossil fuels in powerplants, industry, vehicles, and

⁹ <https://dev-aqli-epic.pantheonsite.io/pollution-facts/>

¹⁰ <https://horizon-magazine.eu/article/four-times-more-toxic-how-wildfire-smoke-ages-over-time.html>

¹¹ <https://www.epa.gov/radon/health-risk-radon>

¹² https://www.epa.gov/indoor-air-quality-iaq/ozone-generators-are-sold-air-cleaners#:~:text=about%20these%20methods,-_Conclusions,of%20breath%20and%2C%20throat%20irritation

¹³ <https://www.ncbi.nlm.nih.gov/books/NBK138707/>

households¹⁴. Increased deployment of renewable energy, improvements in energy efficiency, better sector integration and more electrification of end-uses would result in air quality improvements as well. In the heating and cooling sector, electric heat pumps have a key role to play in the dual decarbonisation and zero-pollution ambition.

In the building sector, energy efficiency and indoor air quality go hand in hand as well. Reducing the energy consumption of buildings requires making them ever more airtight and insulated. Mechanical ventilation with correct air filtration ensures the continued supply of clean air indoors while recovering energy from the exhaust air. Air curtains prevent both heat losses and the ingress of outdoor pollutants across open doors and other openings in the building envelope.

¹⁴ <https://dev-aqli-epic.pantheonsite.io/pollution-facts/>

Eurovent and transparency

When assessing position papers, are you aware whom you are dealing with?

Eurovent's structure rests upon democratic decision-making procedures between its members and their representatives. The more than 1.000 organisations within the Eurovent network count on us to represent their needs in a fair and transparent manner. Accordingly, we can answer policy makers' questions regarding our representativeness and decisions-making processes as follows:

<p>1. Who receives which number of votes?</p> <p>At Eurovent, the number of votes is never determined by organisation sizes, country sizes, or membership fee levels. SMEs and large multinationals receive the same number of votes within our technical working groups: 2 votes if belonging to a national Member Association, 1 vote if not. In our General Assembly and Eurovent Commission ('steering committee'), our national Member Associations receive two votes per country.</p>	<p>2. Who has the final decision-making power?</p> <p>The Eurovent Commission acts as the association's 'steering committee'. It defines the overall association roadmap, makes decisions on horizontal topics, and mediates in case manufacturers cannot agree within technical working groups. The Commission consists of national Member Associations, receiving two votes per country independent from its size or economic weight.</p>
<p>3. How European is the association?</p> <p>More than 90 per cent of manufacturers within Eurovent manufacture in and come from Europe. They employ around 150.000 people in Europe largely within the secondary sector. Our structure as an umbrella enables us to consolidate manufacturers' positions across the industry, ensuring a broad and credible representation.</p>	<p>4. How representative is the organisation?</p> <p>Eurovent represents more than 1.000 companies of all sizes spread widely across 20+ European countries, which are treated equally. As each country receives the same number of votes, there is no 'leading' country. Our national Member Associations ensure a wide-ranging national outreach also to remote locations.</p>

Check on us in the [European Union Transparency Register](#) under identification no. 89424237848-89.

We are Europe's Industry Association for Indoor Climate (HVAC), Process Cooling, and Food Cold Chain Technologies – thinking 'Beyond HVACR'

Eurovent is Europe's Industry Association for Indoor Climate (HVAC), Process Cooling, and Food Cold Chain Technologies. Its members from throughout Europe represent more than 1.000 companies, the majority small and medium-sized manufacturers. Based on objective and verifiable data, these account for a combined annual turnover of more than 30bn EUR, employing around 150.000 people within the association's geographic area. This makes Eurovent one of the largest cross-regional industry committees of its kind. The organisation's activities are based on highly valued democratic decision-making principles, ensuring a level playing field for the entire industry independent from organisation sizes or membership fees.

Eurovent's roots date back to 1958. Over the years, the Brussels-based organisation has become a well-respected and known stakeholder that builds bridges between the manufacturers it represents, associations, legislators and standardisation bodies on a national, regional and international level. While Eurovent strongly supports energy efficient and sustainable technologies, it advocates a holistic approach that also integrates health, life and work quality as well as safety aspects. Eurovent holds in-depth relations with partner associations around the globe. It is a founding member of the ICARHMA network, supporter of REHVA, and contributor to various EU and UN initiatives.