

From Law to Public Health Impact: Implementing the Belgian Framework for Improving Indoor Air Quality in Public Places

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ABSTRACT

Indoor air quality is recognized as a key determinant of public health, given that people spend the majority of their time in indoor environments. In response to growing scientific evidence on the adverse health effects of indoor air pollution, and informed by insights gained during the coronavirus pandemic, Belgium adopted the Law of 6 November 2022 aimed at improving indoor air quality in public places. This legislation establishes a public health framework designed to help reduce exposure to indoor air pollutants and to protect the population's health.

The law introduces a structured and progressive approach to indoor air quality management in publicly accessible spaces. It is based on risk assessment, monitoring, transparency, and continuous improvement. Operators of public places are required to assess indoor air quality, create appropriate mitigation strategies when necessary, and inform users about the air quality status of their premises. Reference indicators are used to support these assessments and to guide corrective actions, ensuring a consistent and comparable approach across different types of public spaces. A central element of the legislation is the development of a health-based norm for indoor air quality. This norm is being established on the basis of the best available scientific evidence and aims to translate complex health data into clear, actionable criteria for policy implementation, inspection, and enforcement. By grounding regulatory requirements in health protection objectives, the law explicitly links indoor air quality management to broader public health strategies.

The implementation of the law has highlighted several challenges. At the political level, coordination between different authorities and stakeholders is required due to the distribution of competences. From a scientific perspective, difficulties arise in converting evolving and sometimes uncertain evidence into stable regulatory thresholds. In addition, public understanding and acceptance of indoor air quality measures require clear communication and awareness-raising, as indoor air pollution is often less visible than other environmental health risks.

The legislation provides for ongoing evaluation and future development. Planned actions include further refinement of the health-based norm, strengthening data collection and monitoring, building capacity among operators and inspectors, and enhancing public communication. Overall, the Law of 6 November 2022 establishes a comprehensive and preventive framework that integrates indoor air quality into public health policy, with the long-term objective of improving indoor environments and safeguarding population health.

KEYWORDS

Indoor air quality, Public health policy, Health-based standards, Indoor air regulation, Certification of indoor air