

Focus on Indoor Environmental Quality

IEQ at 44th AIVC conference, Model IEQ regulation to fulfil the EPBD 2024

As featured in the December 2024 issue of REHVA Journal: EPBD and IEQ go hand in hand. Currently EPBD 2024 guidance documents and delegated acts are under preparation. In November 2024 a not public draft guidance, on Article 13, 23, 24, Technical Building Systems, Indoor Environmental Quality and Inspections, has been communicated with the Energy Performance of Buildings Committee.

Parallel to these EU Commission actions, REHVA, the Nordic Ventilation Group and Eurovent Association agreed on a common proposal on “*Model Indoor Environmental Quality regulation to fulfil new provisions of EPBD 2024*”. The first article by Jarek Kurnitski describes this model and we expect that this contribution will be a very useful basis for the guidance to be published by the Commission.

This RJ issue is a special on the AIVC conference held October 2024. We selected papers that have a focus on IAQ, health and ventilation performance. Interesting is the article on baby day care centres where it demonstrated that poor ventilation systems may contribute to high infection rates for children whose respiratory systems are still developing. “*Adults typically inhale and exhale around 23,000 times a day, but this frequency is notably higher in infants and toddlers, who take about 50,000 breaths daily [1]. This increased rate of breathing in young children, coupled with their proportionally larger breathing volume relative to body weight, not only highlights their more intense interaction with their immediate atmospheric environment but also underscores the critical importance of the quality of air they are exposed to.*” Perhaps this article inspires designers and regulators to improve the health situation in those day care centres. For sure a cost-effective measure as it is expected to reduce the sick-leave of the staff and long-lasting medical treatment for vulnerable children.

Articles on performance based approaches for ventilation systems and how a harm budget can be used to regulate Indoor Air Quality in Dwellings are valuable contributions to EPBD art. 6 on cost optimality. This article introduces environmental and health externalities in the cost-optimal framework and aims to include also other benefits of measures improving buildings’ EP than the energy and related cost savings, such as the co-benefits linked with improved health and well-being.

The selection of 7 articles based on 140 papers is always subjective, for those readers motivated to learn more the AIVC conference proceedings are freely downloadable at: <https://convin.gr/assets/files/misc/AIVC2024Proceedings.pdf>

More activities at CEN level on IEQ

Revision of EN 16798-1-2018 “*Energy performance of buildings - Ventilation for buildings - Part 1: Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics*”. This IEQ standard is currently under revision. Several working groups of four different CEN Technical Committees are working on the different parts. This preliminary work may result in public consultation around 2026/27. ■



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