Indoor Environmental Quality needs a multidisciplinary approach

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Indoor Environmental Quality (IEQ) is the main theme of this issue. No surprise given the earlier announced participation of REHVA in the new international network organisation Indoor Environmental Quality-Global Alliance (IEQ-GA) (see page 62). The articles in this REHVA Journal reflect that many disciplines are needed to guaranty a high or acceptable IEQ.

The impact of energy saving measures on the IEQ is the main background of several articles. Improved Energy Performance (EP) and improved IEQ can go hand in hand. CO_2 controlled ventilation, better air distribution systems, a design tool for night ventilation are good examples. Two articles on new EPB-standards on emitters ("emitter" efficiency) and control of fans give insight how these standards support both: EP and IEQ.

The article on observed IEQ in Dutch homes shows that we have to invest more in the quality of works and clarity of the building regulation, this was also the main focus of our last REHVA Journal, we as professionals know how to design but are not always able to perform in practise. Better QA and commission are to be required by our clients and should be part of our building regulation.

In more special cases more research in the relation between sleep performance and IAQ (CO_2 related) is needed to support the default requirement as stated in the prEN16798-1 "Indoor environmental input parameters for the design and assessment of energy performance of buildings". This standard indicates that Category I: Design ΔCO_2 concentration for bedrooms of 380 ppm above outdoors, is needed for people in the category of "… recommended for spaces occupied by very sensitive and fragile persons with special requirements like some disabilities, sick, very young children and elderly persons, …". People suffering from Alzheimer, or another form of dementia, may have lost an adaptive response to high CO_2 levels and can react physically more intense and already at relatively low ΔCO_2 levels of about 550 ppm (Bedrooms Class II).

Sometimes reported research may lead to confusion as happened with an article reporting about women requiring higher temperatures when mechanical cooling is effective under summer conditions. A clear reaction from Bjarne Olesen clarifies this being a wrong conclusion. To say it short: there are differences in appreciation of the indoor temperature but they are almost entirely related to the difference in clothing level. Complains from the female population about a low temperature in offices in the summer are not uncommon but can only be avoided if we normalise the clothing levels of both sexes or give the temperature control to the persons with the lowest clo-levels (which might save cooling energy).

Page 71 is reporting the current status of the EPB-standardisation. **Important to read!** Almost all standards passed the enquiry. The Overarching Standard prEN-ISO/DIS 52000-1 "Energy performance of buildings — Overarching EPB assessment — Part 1: General framework and procedures" replacing the prEN15603 is now out for enquiry. This draft has been developed by CEN, and processed under the CEN lead as defined in the Vienna Agreement. This draft is submitted to the ISO member bodies and to the CEN member bodies for a parallel 3 month enquiry. It is important that all National Standard Bodies are aware of this pending enquiry and vote before the closing date of Friday November 27, 2015. ■