Greener Cleaning Products Recommended for UAE Schools

A new study conducted by the Emirates Green Building Council has found that classrooms in a Dubai school contained concentrations of contaminants higher than those allowed by the legal limits as defined by the emirate's Municipality. The cause of the pollution is thought to be the excessive use of cleaning products in an attempt to keep pupils and staff safe from coronavirus.

Additionally, the research revealed that temperature and humidity levels in the classrooms could be detrimentally impacting students' performance, concentration and health. Therefore, the authors of the paper recommended substituting chemical-based cleaning agents for natural alternatives and improving ventilation in and around the school.

Youth at risk

The research focused on the ambient air quality in classrooms in a secondary school in central Dubai. They found that in at least two classrooms, there were elevated concentrations of harmful pollutants that were above the legal threshold, as well as unsafe temperature and humidity levels.

In particular, the researchers found traces of acetone, benzene, ethylbenzene, terpenes, toluene and xylene, all of which are contained in chemical cleaning products. They also discovered evidence of dichlorobenzenes – a key component in many pesticides – in one room. Although this particular study was small in its scope, the authors commented that the practice of over-cleaning so as to wipe out all remnants of COVID-19 had become widespread across the Emirates.

Damaging consequences

All of the aforementioned cleaning agent chemicals have been linked with concerning health implications if humans are exposed to them over a prolonged period. According to the US Centres for Disease Control and Prevention (CDCP), they can cause or exacerbate anaemia, excessive bleeding, a higher heart rate and increased risk of infection from other diseases.

Dichlorobenzenes, meanwhile, has provoked nausea, dizziness, vomiting and difficulties with breathing, as well as swelling and inflammation around the eyes.

Even more concerningly, it has been found to cause both cancer of the kidney and of the liver in animals, though a link in human subjects has not yet been conclusively proven.

Taking precautions

The authors behind the study said that school authorities should not sacrifice their standards of hygiene and cleanliness over air pollution concerns, but should rather switch to fragrance-free and organic cleaning agents. All cleaning regimes should also take place when pupils are not present, while opening windows to ensure adequate ventilation can disperse any lingering contaminants is also a beneficial tactic.

Thinking of the bigger picture, there are ways in which schools, universities and other public buildings can mitigate the effects of poor air quality. Technology is a vital weapon in the fight against ambient air pollution and new developments are revolutionising our approach to the issue all the time. For those interested, the article How Can Smart Cities Improve Air Quality? has more detailed information on the topic.