

Malaysia is fighting the climate crisis with better buildings

Kuala Lumpur (CNN Business) - The world is heating up, making us rethink not just how we live but where we live and work too.

Buildings account for nearly 40% of greenhouse gas emissions worldwide, and more renewable energy will be needed to meet targets mandated by the Paris climate accord, according to Architecture 2030, a nonprofit group that works with construction companies.

Malaysia is tackling the challenge head-on. Architects have to take into account a year-round tropical climate in addition to the effect of carbon emissions from their projects.

Air conditioning is central to the debate. In a place like Malaysia it's essential. But it's also powered by huge amounts of energy that significantly heats up the planet.

Dr. Tan Loke Mun, an architect based in Kuala Lumpur, has spent years thinking about how to ensure homes and offices offer comfort without adding to the climate crisis.

Inside his home, an airy tree-lined property, he's come up with simple upgrades to provide all the functions residents expect while saving energy.

The first thing to address is what he describes as low-hanging fruit.

Instead of installing air conditioning on the wall or ceiling, for example, vents are installed in the floor. Simply placing the system there can save a building about 30% to 50% of energy used, he said.

Materials also play an important role. The windows in Tan's home are made from a type of glass that "lets in the light, but not the heat," the architect said.

The most important feature is the roof, because that's where about 60% to 80% of the heat in a building typically escapes, Tan said.

In colder climates, architects and builders focus on insulating the roof to keep heat inside and lower fuel consumption. In Malaysia, they're trying to do the reverse — encourage more heat to flow out through the roof.

For his home, Tan designed a large, overhanging roof and placed wind turbines on top to draw more hot air out, and cool air in.

Tan, who teaches architecture at a local university, says he has seen students embrace sustainable design.

"I think the next generation will change the world," he said. "Green is not a style ... [it's] the right thing to do."

Reference: <https://edition.cnn.com/2019/08/12/business/malaysia-climate-change-green-buildings/index.html>