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Ecolibrium



MOD.

"THUS IN
WONDER
I AM LOST"

David Unaipon

FOOD
LORE

ITALIAN COFFEE
RAPPOLITANA RECETTA
PIRELLA GÖTTSCHE LOWE
923

Lofty goals

An SA cancer facility boasts world-class holistic design.



The heat is on

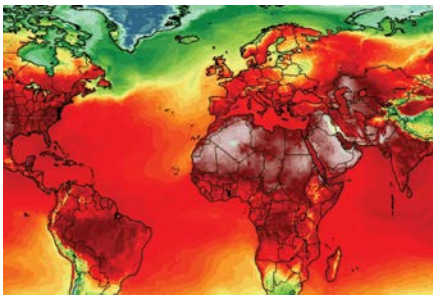
Global CO₂ levels hit a historic high.

About the same time as the Australian electorate rejected serious action on climate change, scientists in the US detected the highest levels of planet-warming carbon dioxide in the Earth's atmosphere since records began.

The Mauna Loa Observatory in Hawaii, which has tracked atmospheric CO₂ levels since the late 1950s, detected 415.26 parts per million early last month.

It was the first time on record that the observatory measured a daily baseline above 415 ppm.

The last time Earth's atmosphere contained this much CO₂ was more than three million years ago, when global sea levels were several metres higher and parts of Antarctica were covered in forest.



“It shows that we are not on track with protecting the climate at all,” says Wolfgang Lucht from the Potsdam Institute for Climate Impact Research. “The number keeps rising, and it's getting higher year after year. This number needs to stabilise.”

Levels of CO₂ – one of three greenhouse gases produced when fossil fuels are burnt – are climbing at a rapid pace.

And 2019 is likely to be an El Niño year in which temperatures rise due to warmer ocean currents.

The 2015 Paris agreement calls for efforts to block the rise in Earth's temperature from rising above 2°C. In spite of this, the past four years have been the hottest on record.

Earth's average surface temperature has already increased by 1°C since pre-industrial times due to man-made emissions.

“All of human history has been in a colder climate than now,” Lucht says. “Every time an engine runs, we emit CO₂, and it has to go somewhere. It doesn't miraculously disappear; it stays in the atmosphere.” ■



Based in Melbourne, Jodhi Atmaja, M.AIRAH, is a mechanical engineer in Arup's Buildings group.

Responsibilities

I am responsible for the technical design and technical review of HVAC services, primarily in commercial and education buildings. I also manage projects.

Specialty

Psychrometrics, building ventilation, air distribution systems, hydronic heating and cooling systems, heat rejection, refrigerant systems and fire and smoke control in buildings.

Passions

Producing design solutions that add value and have a lasting impact to the client, end-users and the environment. I am also passionate about understanding the technology of HVAC equipment that is available in the market or still in development, learning about its intricacies and the science behind it.

Professional development

Self-learning through engineering articles and other publications. Attending seminars and conferences. Learning from the people around me is essential. I am fortunate that I get to work with some of the smartest and most capable people in the industry.

Favourite destination

Japan is my most recent favourite destination. I lived in Toronto, Canada when I was an undergrad so I would love to travel there again and visit North America in general.

Plans for the future

Being further involved in a range of technical and non-technical roles and be exposed to all sides of the consultancy business. I am keen to gain more experience and exposure to how building design and construction are undertaken in other parts of the globe, and leverage them to further improve my knowledge and skills. ■

Party in the plant room



Paul Jackson, F.AIRAH, is commissioning manager at ECS and is counting down to World Refrigeration Day on June 26.

Eco: Why is HVAC&R important?

PJ: Buildings account for more than 35 per cent of total energy consumption. In most of those structures, heating, ventilation and air conditioning systems consume more than 30 per cent of the total energy.

Eco: What is the most satisfying aspect of your work?

PJ: Seeing systems within a project move from a static state to a fully operational integrated environment.

Eco: How will you celebrate World Refrigeration Day?

PJ: It will be a time for reflecting on how far we have travelled in the last 150-plus years – probably over a beer! ■