

# 'Going virtual' sees international conference cut carbon emissions by 425 tons and boost LMIC attendance

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Switching to virtual conferencing can have a huge impact on the carbon footprint of major scientific events and significantly increase attendance

from those in low and middle income countries, according to new research published in in *The Lancet Planetary Health*.

Led by the London School of Hygiene & Tropical Medicine, the study examined data from the ANH (Agriculture, Nutrition and Health) Academy Week, a renowned international food and agriculture conference, held annually and alternating between locations in Asia and Africa. The COVID-19 pandemic necessitated moving the conference online for 2020 and 2021.

The team found moving the event to online in 2021 cut travel-related emissions to zero and doubled attendance numbers compared to previous in-person iterations of the event. Importantly, this also translated to increased attendance from a wider geographic spread at the virtual event, including more people from low and [middle income countries](#).

The average number of unique LMICs that were represented between 2016-2019 was 23, while the [online conference](#) in 2020 attracted participants from 46 unique LMICs.

In 2019, when the conference was held in India, air travel emissions represented 1.2 tons of CO<sub>2</sub> per participant, which is more than 60% of the 1.9 tons a typical person generates in India in an entire year. For the 2020 online event, the aviation-related CO<sub>2</sub> was zero.

The research looked at data routinely collected for each conference, such as participant satisfaction surveys and delegate attendance at conference [social events](#). Estimates of CO<sub>2</sub> generated by [international flights](#) were computed using an online calculator tool from Atmosfair.

The authors say their work highlights the environmental burden of academic air travel and showcases the planetary health and societal benefits of moving large international events to virtual settings.

However, they also caution that that online formats present trade-offs when it comes to delegate participation in social events and networking.

Joe Yates, from LSHTM who led the study, said:

"The cut in [carbon emissions](#) demonstrated here is stark, and shows that it's possible to make significant changes to the carbon footprint of a scientific conference by going online, while increasing overall attendance across the world.

"While this may seem like a 'win-win', it's important to note that while the switch to virtual eliminated the burden and impacts of air travel for many and therefore increased attendance, the virtual environment can't overcome all equity issues. For example during our 2020 conference we saw full-day internet outages in both Ethiopia and Malawi; while participation in opportunities to connect and socialise was considerably reduced.

"These issues must be proactively considered by conference organisers to reach the goal of equitable scientific exchange in global programmes such as ours."

The authors acknowledge limitations of the study including that the data used were originally collected for the purposes of [conference](#) management, rather than for research. Feedback surveys elicited lower responses following online events versus in person, and these data should be treated with caution.

**More information:** Can virtual events achieve co-benefits for climate, participation, and satisfaction? Comparative evidence from five international Agriculture, Nutrition and Health Academy Week conferences, *The Lancet Planetary Health*, [www.thelancet.com/journals/lan ... \(21\)00355-7/fulltext](http://www.thelancet.com/journals/lan ... (21)00355-7/fulltext)

Provided by London School of Hygiene & Tropical Medicine

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