

Single-city climate conventions damaging carbon emissions pledges, says study

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Holding Conference(s) of the Parties of the UNFCCC (COP) across multiple continents simultaneously should become the norm to dramatically lower carbon emissions from attendee travel, researchers have argued.

Scientists who recently trialed a hybrid [conference](#) model by holding a major annual climate conference in the U.K., U.S. and China found it reduced carbon emissions by as much as three quarters while providing a positive experience for attendees.

The trial results are [published](#) this month in *Bulletin of the American Meteorological Society*. It follows scrutiny of the travel plans of delegates attending COP28 in the United Arab Emirates, with the number of private and long-haul flights taken questioned by many.

The Vice-Chancellor of the University of Reading has called on COP organizers to transition from single-city summits and spread the conference over multiple locations if they want to be serious about cutting carbon emissions.

Professor Robert Van de Noort said, "There is massive potential for carbon reduction if future COP climate summits adopt a multi-hub format. I urge COP organizers to carefully consider this study and trial multi-hub conferences. We must pursue every avenue to rapidly decarbonize these pivotal climate talks. As leaders in sustainability, the University of Reading stands ready to assist in any way we can, but the onus is now on the COP community to have the courage to overhaul traditions in favor of our planet."

Multi-hub model

The research team experimented with a real-life example of a multi-hub conference to examine its impact on [carbon emissions](#). The Stratosphere-Troposphere Processes And their Role in Climate (SPARC) General Assembly was held simultaneously in the First Institute for Oceanography Qingdao, China, the European Center for Medium-Range Weather Forecasts in Reading, U.K., and the National Center for Atmospheric Research in Boulder, United States, in late October 2022.

More than 400 people participated across the three venues. The conference was designed to find a way that researchers in different hubs could still have the benefit of interacting with other attendees both in person and in the other hubs.

Based on travel surveys completed by attendees, researchers estimated the multi-hub format reduced the conference's carbon footprint by 65%–75% compared to holding it in any one of the three cities alone. The lower footprint resulted in estimated [carbon](#) dioxide equivalent (CO₂eq) savings of between 288 and 683 metric tons.

Positive feedback

The researchers acknowledged some limitations of the format, including less interaction between poster sessions and challenges collaborating across hubs during breaks.

However, after the conference concluded, 85% of surveyed participants said they would attend a similar multi-hub event in the future. There was particularly enthusiastic support among early career researchers.

The researchers suggest further innovations in conference design could help address the remaining challenges to make a hybrid experience a viable option for major events.

Professor Andrew Charlton-Perez, lead author of the study, said, "We greatly encourage conference organizers to take inspiration from our experiment and implement solutions tailored to their events. Through continued innovation, we can retain the collaborative spirit and interaction of in-person conferences while slashing their climate impact."

More information: Stefanie Kremser et al, Decarbonizing Conference

Travel: Testing a Multi-Hub Approach, *Bulletin of the American Meteorological Society* (2023). [DOI: 10.1175/BAMS-D-23-0160.1](https://doi.org/10.1175/BAMS-D-23-0160.1)

Provided by University of Reading

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