

Letter to Editor

Conference and carbon footprint – Learning from the pandemic

Damal Chandrasekar Mathangi¹, Narasimman Swaminathan²

Departments of ¹Mind Body Medicine and Lifestyle Sciences, Faculty of Allied Health Sciences, ²Faculty of Allied Health Sciences and Faculty of Physiotherapy, Sri Ramachandra Institute of Higher Education and Research, Chennai, Tamil Nadu, India.

Dear Sir,

Higher education institutions are under constant demand to organize conferences with international speakers. Participation in international conferences is considered as a performance indicator for both the institute and faculty members. Impact of our academic air travel skips all scrutiny as these trips are always linked with professional growth or identities or even responsibilities or euphoria. Are we as the elite educated community ethical in adding significant carbon footprint and contributing to the anthropogenic climate change?

The researchers and academicians demand immediate and imperative large-scale actions from countries and corporate across the globe to tackle climate change. Academicians give multiple white papers and contribute to the policy making bodies too. The global COVID-19 pandemic has made a tremendous impact not only making classes and evaluation go online but also the multiple webinars with experts across the globe coming on the same platform and also reaching audience across the globe.^[1,2] At this juncture, we need to introspect, is this a transient change, or can we make this have a larger impact on the scientific community. Change management begins with in us! Let us end this hypocrisy and not just talk but take steps to walk toward greener conferences on the long run too. Initiatives at individual, institutional, and policy-makers or government levels are warranted.

Some of the plausible options to be deliberated on

1. Carbon footprint of each researcher or faculty can be included in their appraisal as a commitment to the environment or Swachhta (cleanliness) score^[3]
2. Have a sealing limit on total kilometer travel. Total distance of traveling can be limited per academician/scientist for a specified period of time. Duration of stay may be increased to combine other related academic/scientific activities. Multiple clustered location meetings in the selected region with specified itinerary for a longer duration, thus reducing multiple or frequent travels are to be encouraged^[4]
3. Delivering conference lectures through video conferencing mode may be considered for higher weightage in academic performance indicator
4. Institutional or national guidelines on international travel and their environmental impact need to be developed
5. In-person travel to conferences does bring in lot of benefits including collaborative research proposals, exchange of ideas, and postdoctoral fellowship. However, individuals in early career may be encouraged to travel to establish contacts or explore career prospects
6. Ranking agencies are giving importance to number of conferences, which have resulted in institution conducting multiple conferences annually. Such practices increase the financial burden and compromise the quality. Importance needs to be on quality and not on quantity. Institutions should be encouraged to conduct conferences in collaboration with other organization or institutions as a consortium to pool the international resource faculty invited

*Corresponding author: Mathangi Damal Chandrasekar, Department of Mind Body Medicine and Lifestyle Sciences, Faculty of Allied Health Sciences, Sri Ramachandra Institute of Higher Education, Chennai, Tamil Nadu, India. dcmathangi@gmail.com

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7. Effective utilization of infrastructural facilities in the conduct of conferences should be considered in the ranking or grading of institutions. Faculty attending conferences through online mode should be given higher weightage by the accrediting bodies
8. Scientific bodies organizing conference should be encouraged to have the state of the art videoconferencing facilities at their headquarters and live stream it to their multiple regional centers across the globe like the Sings of Change 2018 conference which has reported to have reduced their carbon footprinting by 85,000 tons.^[5] Another example of effective use of digital technology is the UCSB 2016 conference where researchers from the six continents participated in the virtual conference about climate change.^[6] This conference shared information through texts, web links, audio, and videos in addition to strong informal networks such as virtual chat rooms and hangouts. The organizers observed that this event was better than the in-person interactions at the traditional conferences and enabled better networking too. In addition, such conferences are not only cost effective, but the precious time spent on travel is saved
9. While submitting the report on conference, organizers may be encouraged to provide specific information on the tons of carbon footprint reduced through use of technology and judicious policies followed in international speakers invited. This sets the tone for a special evaluation of effectiveness of conferences in reducing carbon footprint
10. Funding agencies which sponsor international travel both in and outbound should consider the travel distance and the resulting carbon footprinting along with the conference outcomes. Geographical proximity of the external resource faculties may be practiced. In meetings which do not require face to face contact and can be done through video conferencing, travel of such experts too should be avoided.

Although human air travel constitutes too less to the carbon footprint, emission from aircraft has a far significant impact,^[7] almost 2.7 times, on climate change because of the altitude where their emission occurs^[8] which has given the serious alarm on reducing the number of aircrafts flying. Travel by economy class contributes approximated 1 kg of carbon dioxide per 10 km, however, efficient their flights may be. According to World Bank, the mean carbon dioxide emission per person per year in India is 1.7 metric tons.^[9] All these are not limited to international resource faculty alone; it applies to researchers or faculty who use air travel frequently to attend conferences even within the same country. Being the learned elite, we need to practice forward thinking with social commitment. Let us make this transition toward virtual meetings the way forward as the long-term impact on climate change needs to be our responsibility too. COVID-19 pandemic should probably

reduce the fear of the academicians and scientists on this isolation to impact collaborative initiatives.

The ideas expressed here are not to discourage traveling overseas, but only to reduce it to the extent possible - in other words, prioritize or use alternative methods to achieve the goals of participate in the conferences. We discussed only one impact of conference on carbon footprinting, that is, air travel. However, we might require a multipronged approach in reducing carbon footprinting through conferences, which may include the mementos, complements, and water bottles used. Steps taken in this direction should be encouraged and such events should be lauded and publicized.

The change due to the COVID-19 pandemic on the academic meetings and conferences, all going virtually, should not be short lived. Let us take this changed format of online conferencing beyond the pandemic too. An act by the scientific community is like the saying "first set your home straight," "Let us lead by example." We the scientific community are not only showing or debating about the data on global warming and the anthropogenic climate change but also taking effort in reducing it. Such an act will have a strong impact on the common public and also encourage people from other profession to follow suit.

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