

World view



By Benjamin M. Sanderson

The IPCC needs its own net-zero target

A robust strategy to limit the IPCC's carbon footprint would be a testbed for international climate policy – and neutralize accusations of hypocrisy.

In April, I flew to Bangkok for the final meeting of the United Nations Intergovernmental Panel on Climate Change (IPCC) 6th Assessment Cycle (AR6). My return flight to Stockholm emitted more carbon than any one person in the lowest-emitting 50% of the global population contributes in an entire year.

The latest AR6 synthesis report (see [go.nature.com/4h-fkzpc](https://www.nature.com/4h-fkzpc)) concludes that rapid, deep and immediate emissions reductions are needed to maintain a liveable world. But this powerful messaging is diluted by the IPCC's actions.

The IPCC should aggressively limit its own emissions instead of requiring in-person sessions and the attendant long-haul flights. Although meetings contribute only a tiny fraction of total global emissions, improving accountability would have an outsized impact on the IPCC's effectiveness, and would be a case study for robust, internationally coordinated mitigation.

The COVID-19 pandemic has demonstrated that many IPCC meetings can be conducted fully remotely, and most climate researchers are in favour of virtual elements in conferences. This is in line with trends in the wider climate-science community: the World Climate Research Programme's Coupled Model Intercomparison Project, which helps to coordinate climate models, has proposed that it should lead by example and transition to net-zero emissions as fast as possible. But similar statements from the IPCC are notably absent.

This irony does not go unnoticed across the political spectrum. Conservatives point to individual researchers' emissions to justify lack of urgency or to validate their view that institutional decarbonization is impossible; progressives see a lack of effective action and a growing philosophical barrier between science and activism. Researchers' individual actions resonate with the public: in one US study, support for carbon taxation increased by up to 60% when respondents were told that the researchers had made efforts to reduce their carbon footprints (S. Z. Attari *et al. Clim. Change* **154**, 529–545; 2019).

The in-person model also acts as a demographic and social filter. The need to spend extended time away from home can lead to gender bias: a survey of academic faculty members indicated that mothers are more than twice as likely as fathers to experience parenting stress as a result of attending conferences (see [go.nature.com/3o9ds](https://www.nature.com/3o9ds)). In-person meetings also create barriers owing to difficulties obtaining visas. And requiring travel risks

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Benjamin M. Sanderson is research director of the climate mitigation group at the CICERO Centre for International Climate Research in Oslo, Norway. e-mail: benjamin.sanderson@cicero.oslo.no

under-representing the generation that will experience the most severe climate impacts, because non-fliers, a growing fraction of scientists, are more likely to be younger.

There are wider concerns about vaguely defined net-zero policies, which allow policymakers to broadcast their intentions to meet climate targets sometime in the future, while global emissions remain broadly constant today. Emissions-reduction plans are highly dependent on the future development and large-scale deployment of technologies to remove carbon dioxide from the air. The technological and physical plausibility of achieving net zero, as well as its definition, are subjects of extensive scientific debate.

By taking aggressive action to reduce emissions during the next assessment cycle (which ends in 2030), the IPCC could be a test case for a better approach. It could first outline an objective and unbiased process for quantifying current emissions, then define and assess the risks of different pathways for complete decarbonization. The emissions associated with the IPCC process are not trivial, but they are manageable. The challenges mirror those of the wider mitigation problem: assessment of direct and indirect emissions, the need for fairness in the face of robust targets, the reliability of removal methods and the need for international agreement on how to verify them.

Emissions reductions should not come at the cost of the IPCC's ability to assess and communicate cutting-edge science. On the one hand, some in-person meetings might be needed to facilitate communications on sensitive or thorny topics, but on the other, off-the-record backroom chats can entrench positions of influence.

Such decisions need to be made in a cost-benefit framework, informed by an accurately quantified carbon footprint. For instance, if the IPCC is to use CO₂ removal to address its remaining unavoidable emissions and reach net zero, it must be transparent about the inherent uncertainties in the permanence of the carbon-storage technologies used. Such efforts would increase global understanding and industrial competence in CO₂ removal while acknowledging that the technology can be effective on a global scale only if paired with radical emissions cuts.

Even failure to achieve targets would be useful, by highlighting real-world limitations in net-zero policy assumptions, which could then inform wider societal strategy.

As the July elections for the next assessment cycle approach, IPCC members should remember that nobody is better placed to demonstrate how to eliminate emissions. The IPCC's actions matter, not just its words. Although it might make climate scientists uncomfortable, what the IPCC does about its own carbon emissions might be as crucial to its effectiveness as advancing cogent and robust science.