

## CORONAVIRUS

# Virtual meetings: A critical step to address climate change

Pristine lakes and pollution-free skies marked the early months of the coronavirus lockdown—environmental benefits of swift action to safeguard against the spread of coronavirus (1). For its part, the scientific community canceled or reconfigured national and international meetings as virtual meetings. Study sections, site visits, seminars, and job interviews were held online. The scale of changes made by universities and scientific organizations in the timing and implementation of these measures is inspiring. Many of these actions were at enormous personal and collective sacrifice but based on the scientific evidence showing a dire threat to humanity.

As locales reopen, the climate benefits reaped as a result of lockdown appear only temporary. The effects of climate change, however, potentially pose an even more serious threat to humanity than coronavirus (2). Like coronavirus, climate change requires individual and collective behavioral adjustments for the common good but because the time scale for climate change stretches to years and decades, making these changes may appear less urgent than the ones required for a global pandemic.

As individual scientists, we are accustomed to working toward long-term goals. We invest decades in our training, and many of us conduct research programs that require decades to come to fruition. Similarly, in our personal lives, most of us avoid smoking, try to eat well, exercise, and save for retirement, all of which are long-term goals. These decisions are similar in time scale to those needed to address climate change. We need to harness the same capacity for long-term thinking to make the individual sacrifices necessary to accomplish a collective good, not in the next few decades but in the next few months and years.

How can we make sure that the academic organizations and institutions that we lead will help us to achieve this goal? Many organizations have espoused green policies, committing to goals like 100% carbon neutral meetings. To ensure that these are not just aspirational words, we should encourage our institutions to meet these goals with the same sense of urgency that we have used to address the novel coronavirus. Among the most important changes we can make is to reduce the need for airline travel to meetings (3).

As the pandemic continues, virtual meetings are replacing traditional meetings that required air travel, thus dramatically reducing the carbon footprint of

these meetings. Can we get the same results from virtual meetings? Although some features are difficult to replicate online, academics and professionals are becoming increasingly proficient in virtual conferencing tools, such as break-out discussions, digital poster sessions, virtual white boards, real-time chat functions, and informal post-meeting “social hours,” thus reducing our reliance on in-person networking for professional development. We are only a few months into the changes wrought by the novel coronavirus, and already many of us have learned enormous amounts about the challenges and opportunities associated with holding online meetings. Although none of us wished for it, this pandemic has forced us to rethink meetings and to begin the inevitable process of experimentation, with the requisite successes and failures. These lessons will also be of immense value for our ongoing efforts to reduce travel and thereby address climate change. We must continue these experiments even when the threat of the current pandemic recedes.

Even though it may be unrealistic to hold all academic meetings virtually, addressing climate change requires more than just cosmetic changes. When travel is necessary, the distances should be minimized, and professional societies should consider carbon offsets, although they are clearly not a panacea (4–7). Other steps include choosing venues based on the steps they are taking to combat climate change and developing a virtual option for meeting attendance that is not inherently viewed as “less than” in-person attendance. Future meetings could be distributed at multiple regional hubs that are virtually interconnected, such that there is less incentive to travel long distances (8). Many activities like seminars, study sections, and advisory board meetings can and should be switched to online formats. While social distancing has highlighted our appetite for in-person interactions (9), we can use our immense creativity to explore climate-savvy ways to reduce the scientific community’s heavy reliance on travel, especially long-distance travel by air.

COVID-19 has shown us that we can act quickly and dramatically if we are willing to acknowledge the consequences of inaction. Scientists are uniquely positioned to act as leaders by embracing substantial changes with a sense of urgency. There is hope that a vaccine will soon allow us to return to our pre-pandemic lives, but there will be no vaccine to save us from climate change.

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