

CLIMATE QUARTERLY

The Newsletter of the AAD ERG on Climate and Environmental Affairs



CLIMATE CHANGE IN THE LITERATURE AND NEWS

In this edition, Dr. Eva Parker reviews 3 recent articles and provides her perspective on their significance.

- Bousema, T., et al. [Reducing the Carbon Footprint of Academic Conferences: The Example of the American Society of Tropical Medicine and Hygiene \[published online ahead of print, Oct 2020\]. Am J Trop Med Hyg. doi:10.4269/ajtmh.20-1013.](#)

Summary: This article estimates the carbon footprint of the largest global health conference in the world: the 2019 annual meeting of the ASTMH. With over 4.8K attendees, the authors estimated that participants collectively travelled 27.7 million miles with carbon emissions calculated at >8600 CO₂e. To put this in perspective, the authors relate that this distance traveled would be equivalent to 58 roundtrips to the moon and the CO₂ emissions are equivalent to the collectively weekly output of >9600 American households. They offer interesting alternatives to reducing the carbon footprint of large academic medical meetings including greater use of virtual meetings, hybrid in-person/virtual models, and decentralized meetings which, in the context of a large meeting with international attendees from across the global, could reduce the carbon footprint by 58%. *Continued on page 2*

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Commentary: This is startling evidence of how our educational experiences have a profound environmental impact. The COVID-19 pandemic necessitated a dramatic pivot in our approach to how we lecture, learn, collaborate, and disseminate information. During 2020, creativity and technology prevailed, allowing physicians to participate in academic experiences from home. Because our forced adherence to digital platforms during the pandemic has validated the proof-of-concept that virtual meetings are effective at gathering dermatologists and disseminating high-quality medical information, it begs the question, when the COVID-19 threat subsides and virtual meetings are no longer the only option, how as a specialty will we respond? Will we revert to our old ways or will we perhaps begin to prioritize solutions to minimize the carbon footprint of dermatology meetings while balancing the intellectual experience of academic conferences and the inherent value of networking and collaboration that in-person meetings afford?

- Harsha, D. [The biggest land conservation legislation in a generation. The Harvard Gazette. July 27, 2020.](#)

Summary: On August 4, 2020, President Trump signed the Great American Outdoors Act (GAOA) into law. The bill established a National Park and Public Lands Legacy Restoration Fund providing up to \$9 billion over the next 5 years to cover a substantial backlog of deferred maintenance and improvements at national parks, wildlife refuges, and forests. Additionally, the act fully and permanently funds the Land and Water Conservation Fund with \$900 million annually in perpetuity for new federal land acquisitions. This article details the benefits of this important legislation, the political dynamics that lead to its passing, and the numerous legislative rollbacks under this administration that have undermined public land and environmental protections.

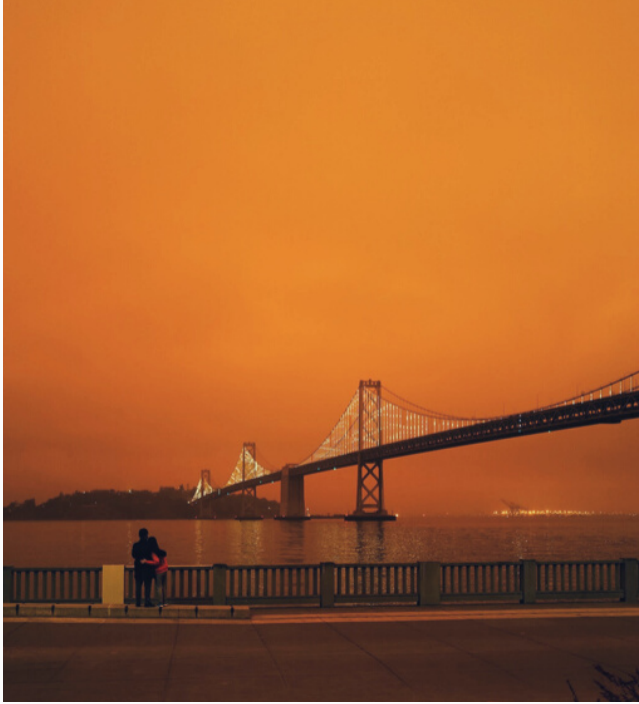
Commentary: The commitment to conservation afforded by the funding of the GAOA is a historic milestone. Sadly, the achievements under this act are grossly overshadowed by the rollback of 100 environmental regulations and our exit from the Paris Climate Accord. In 2018, CO₂ emissions rose in the U.S. by 3% under the Trump administration, and the Rhodium Group estimates that rollbacks

of Obama-era climate regulations will result in an additional 1.8 billion tons of GHGs by 2035. Moreover, GAOA may be robbing the environmental equivalent of Peter to pay Paul as the funding source for this legislation is ironically supported by revenues from energy development, including royalty payments from offshore oil and gas drilling in federal waters. Climate change is very much on the ballot this year and the administration elected on November 3rd will determine if we advance mitigation efforts for GHGs or if we fall further behind in the climate crisis.

- Salas, R., et al. [The Climate Crisis and Covid-19 — A Major Threat to the Pandemic Response. N Engl J Med. 2020;383:e70. DOI: 10.1056/NEJMp2022011.](#)

Summary: The authors describe the complex challenges posed by extreme weather events occurring during a pandemic and offer numerous strategies to modify standard disaster relief practices to minimize the transmission of SARS-CoV-2 during climate-related events. They describe the shared vulnerabilities of patients susceptible to increased health risks under both threats and the underlying role that structural racism plays, while offering lessons on healthcare delivery adaptations from the COVID-19 response that can be applied to extreme weather events. Lastly, the article addresses the stress applied to our health care resources when climate-related disasters occur during a pandemic and how diverted governmental resources during a pandemic reduces our resiliency to extreme weather events.

Commentary: This article underscores how climate change serves as a force multiplier. When record-breaking, climate change-related extreme weather events occur simultaneously with the worst global pandemic in 100 years, the combined stress to our health care system is devastating, amplifying racial disparities and mutual vulnerabilities of susceptible individuals inherent in both threats. In our upcoming webinar Drs. Nelson and Boos will discuss the intersection of climate change, the COVID-19 pandemic, and structural racism.



Climate Sensitive Cutaneous Disease

Wildfires, Air Pollution, and Skin Disease

Sarah Coates, MD

The 2020 wildfire season has been the most severe experienced by the West Coast in recent memory. A combination of factors – including poor rainfall earlier in the year, extreme summer heat waves, and lightning storms – contributed to more acres burning in California alone than in any other wildfire season in the state’s recorded modern history. Periods of poor air quality created by ongoing wildfires have affected physical wellbeing across the West Coast. The skin regulates temperature and serves as an important barrier to environmental toxins, and air pollutants, including many of those emitted during wildfires, are known to be damaging to skin and mucosal health.¹ Those of us practicing dermatology in heavily polluted areas, such as those recently experienced on the West Coast, have experienced firsthand the ways in which air pollution affects skin disease. In our pediatric

dermatology clinics in San Francisco, for example, many of our patients have pointed to episodes of poor air quality as being temporally correlated with flares of their atopic dermatitis and acne. Indeed air pollutants acting in conjunction with various climate factors have been shown to be associated with an increase in eczema prevalence,² and acne flares have also been reported to occur more frequently during periods of poor air quality.³ Further prospective research is required to identify the nature and magnitude of these associations, and of links between air pollution and other skin diseases. As a result of anthropogenic climate change, wildfire seasons are expected to become increasingly intense and unpredictable. As dermatologists, it is our duty to prepare patients for this reality, to counsel them on how best to manage skin diseases under these environmental constraints, and to advocate for those in power to do something to mitigate the worst effects of climate change.

References:

1. Koohgoli R, Hudson L, Naidoo K, Wilkinson S, Chavan B, Birch-Machin M. Bad air gets under your skin. *Exp Dermatol.* 2017;26(5):384-387. doi:10.1111/exd.13257
2. Kathuria P, Silverberg JI. Association of pollution and climate with atopic eczema in US children. *Pediatr Allergy Immunol.* 2016;27(5):478-485. doi:10.1111/pai.12543
3. Krutmann J, Moyal D, Liu W, et al. Pollution and acne: Is there a link? *Clin Cosmet Investig Dermatol.* 2017;10:199-204. doi:10.2147/CCID.S131323



TIPS FOR GREENING YOUR OFFICE

David Fivenson, MD

Light bulbs 101: Light emitting diode (LED) lighting uses 75% less energy and lasts 25 times longer than conventional incandescent or fluorescent lighting. The Department of Energy reports that replacing just 5 lightbulbs in your office with more energy-efficient bulbs can result in a cost savings of \$75 per year while also helping to save the planet.

[Compare the efficiency of LED vs halogen, fluorescent, or incandescent lighting.](#)

[Compare costs of light fixtures, estimate your ROI, and learn about financial incentives available in your own state.](#)

[Calculate how replacing your standard bulbs with LEDs can lead to big savings.](#)

ERG NEWS AND EVENTS

Announcing our first Webinar on Climate Change and Dermatology.

Thursday December 3rd 5:30 PST/8:30 EST

Join us for a free and informative hour bringing an update on climate change and its impacts on skin health and the practice of dermatology.

Speaker Line up:

Misha Rosenbach, MD - Moderator

Eva Parker, MD - Overview on climate change and science

Sarah Coates, MD - Vector borne diseases and climate change

Caroline Nelson, MD - COVID-19 and climate change

Markus Boos, MD - Atopic Dermatitis and Environmental Racism

David Fivenson, MD - Greening your medical office

We're hoping for a large turnout for this Webinar - which we anticipate will be the first in a series of 3 events. To register for the Webinar, [click here](#).

A very big thank you to the Association of Professors of Dermatology for hosting this event.



GET INVOLVED AND TAKE ACTION!

- ✓ Join the Health Voices for Climate Action Initiative and contribute your story on climate and health (<https://climatehealthaction.org/go/storytelling-resources/>).
- ✓ Consider sharing this video from our very own Misha Rosenbach (<https://bit.ly/2H2xCNu>).
- ✓ Get more involved with the ERG! We are developing task forces around medical education, divestment, greening your office, among other issues. Please let us know if you are interested in any of these initiatives by replying to: john.barbieri@pennteam.upenn.edu



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