



In collaboration with:



HARVARD T.H. CHAN
SCHOOL OF PUBLIC HEALTH

C-CHANGE

CENTER FOR CLIMATE, HEALTH,
AND THE GLOBAL ENVIRONMENT

Climate Is Health

*Educational Resources on Climate,
Health, and COVID-19*

Session 2


Session 2

The Connection Between Climate and COVID-19

Getting Started (10-15 min)

Welcome to Session 2 of the “Climate Is Health” series. This week we are focused on how climate is connected with COVID-19. Our Guest Speaker is Dr. Aaron Bernstein, who is the Interim Director of the Center for Climate, Health, and the Global Environment at the Harvard T.H. Chan School of Public Health (Harvard C-CHANGE), a pediatrician at Boston Children’s Hospital, and an Assistant Professor of Pediatrics at Harvard Medical School.

Key concepts this week include [infectious disease](#), [COVID-19](#), and [air pollution](#).

 **If you have time, take a moment to reflect before starting with the session and answer the following questions in a notebook:**

1. How is this topic relevant to your life today?
2. In what ways has the pandemic been most disruptive for you and your community?
3. In what ways do you think this pandemic is changing our impact on the planet?
4. Without doing any research, but perhaps based on your reflections from last week’s session, how do **you** think climate and COVID-19 are connected? What questions do you have about these connections?

Guest Speaker (15 min)



Dr. Aaron Bernstein,
Harvard C-CHANGE

[Watch Interview](#)



Key definitions from the video:

- **RNA**: a single strand of proteins carrying encoded information that acts as the “messenger” for DNA
- **Spillover**: when a pathogen from one species moves into another species
- **Reservoir**: the species (or population of a species) where a disease lives and reproduces
- **Zoonotic**: able to be transmitted from animals to people

Explore in Depth (10-30 min)

More About COVID-19 and Climate Change

[Why the Solutions to Coronavirus and Climate Change are the Same](#) 

Protecting the environment will make us healthier, so we can withstand the next pandemic—or prevent it.

[Our Growing Food Demands Will Lead to More Corona-Like Viruses](#)

As agriculture expands, habitats will shrink. That will likely lead to higher numbers of the species that transmit deadly diseases.

[Want to Stop the Next Pandemic? Start Protecting Wildlife Habitats](#)

There are four critical facets of pandemic prevention: stockpile masks and respirators, have testing infrastructure ready, ban the global wildlife trade, and take care of nature.

[COVID-19 is not a silver lining for the climate, says UN Environment chief](#)

Greenhouse gas emissions are down and air quality has gone up, as governments react to the COVID-19 pandemic. However, the head of the UN Environment Programme (UNEP), Inger Andersen, has cautioned against viewing this as a boon for the environment.

[The Pandemic's Effects on Climate Change](#)

Take a step back and say “what is going on?” in relation to COVID-19’s effects on climate change on this special episode of Global Weirding with Katherine Hayhoe.

[New Research Links Air Pollution to Higher Coronavirus Death Rates](#)

Coronavirus patients in areas that had high levels of air pollution before the pandemic are more likely to die from the infection.

More From Our Guest Speaker

[Coronavirus, Climate Change, and the Environment](#)

A conversation with Dr. Aaron Bernstein, Director of Harvard C-CHANGE.

[The Link Between Fossil Fuel Pollution and the Coronavirus](#)

Climate 2020 talks to Dr. Aaron Bernstein about how pollution and climate change make us sicker, and potentially more vulnerable to outbreaks like coronavirus.

[The Health Effects of Climate Change](#)

This HarvardX course taught by Dr. Aaron Bernstein is free and open to the public and offers a deep dive into the connections between climate and health.

Reflect and Discuss (10-30 min)

1. Why do you think that it's been easier to mobilize a concerted response to the COVID-19 pandemic than it has been to fight climate change?
2. Take a look at [this graph](#) showing the onset of cases and diagnoses of COVID-19 in China in January & February 2020. What hypotheses can you formulate from the data? What questions do you want to know more about?
3. As the human population increases, it is inevitable that we will have more human-wildlife interaction. How do you think this will contribute to the spread of infectious diseases like COVID-19?

Case Study (1-2 hours)

[Addressing Norovirus in Vermont](#)

Explore the above case study from the Center for Disease Control as an example of a public health response to a virus outbreak using real public health data.

- What similarities do you see between this case study and our current situation with COVID-19?
- What main differences do you notice between this public health response to norovirus in 2004 and the public health response to COVID-19 today?
- From outbreak detection to control and prevention measures, what primary challenges were faced and overcome in this case study?
- What questions do you have?


For a different look at case studies focused on zoonotic disease emergence, explore:

[A Framework for the Study of Zoonotic Disease Emergence and its Drivers: Spillover of Bat Pathogens as a Case Study](#)

Take Action (30-60 min)

- ★ **Analyze the successes and failures of the COVID-19 public health campaign in your country.** *Map out your own campaign focused on health and climate.* Who is your target audience? What content will you add to make it more accessible? How will you get people to engage with your campaign? What indicators will you use to measure its success? Create a social media post as part of your campaign and tag #climateishealth or send us a photo of your outreach materials.
- ★ Select your own state or a U.S. city that you are interested in learning more about in [this U.S. Department of Transportation Dataset](#) and observe the percentage of trips made using each mode of transportation. **How do these different modes of transportation influence our climate and which methods of transportation are most sustainable?** *What barriers to sustainable transportation are there in your community that might be lowering this score? How could this be affecting people's health?*
- ★ **Think of one thing you can do related to your transportation choices throughout your lifetime that will positively impact the climate as well as your health.** Alternatively, think of one thing that your community could do to increase access to sustainable forms of transportation. *Write this down.* Share it with us by emailing harvardclimatesummit@goputney.com or tagging #climateishealth.

Connect

 Don't forget to post your ideas and learning journeys on social media with the tag #climateishealth and @HarvardCCHANGE, and email harvardclimatesummit@goputney.com with any questions you have.

Teachers, you can also share resources and start discussions in our Google Classroom platform.

Not signed up for our Google Classroom platform? [Request access here.](#)