

# Yale Climate Change and Health Initiative Annual Report Summary

August 1, 2016 – July 31, 2017

## Structure

*The CCHI is led by Robert Dubrow, Faculty Director, and Martin Klein, Executive Director, in collaboration with an executive committee and 28 affiliated faculty members, and with the support of student associates.*

## Program Accomplishments

### Leadership

- ***Climate Change Leader in Residence***

Our second “Climate Change Leader in Residence” was Dr. Kristie Ebi, Professor of Global Health and Environment and Occupational Health Sciences and Director of the Center for Health & the Global Environment at the University of Washington. Dr. Ebi gave a series of public talks and met with students and faculty during her residence.

- ***Climate Change and Health Leadership Development Workshop***

The weekend workshop provided training on leadership, strategic problem solving, and policy/applied research implementation for student teams conducting projects in a new spring semester course entitled “EPH 555b, Practicum in Climate Change, Sustainability, and Public Health.”



*Dr. Betsy Bradley presenting the Keynote Address at the Leadership Development Workshop*

### Research

- ***Speaker Series on Climate Change and Health***

Dr. Jan Semenza, Head of the Scientific Assessment Section at the European Centre for Disease Prevention and Control, gave a talk on “Climate change and other drivers of infectious disease threat events in Europe.” We also hosted Dr. Sabrina McCormick, Associate Professor, Department of Environmental and Occupational Health, Milken Institute School of Public Health at George Washington University, who spoke about “Climate change in the court system: a new role for public health.”

- ***Pilot Research Grant***

The pilot grant program catalyzes climate change and health research among Yale faculty. The 2017 grant was awarded to Dr. Daniel Weinberger for a project entitled “Effects of extreme climate events on environmental reservoirs and dispersion of Legionella.” The 2016 award went to co-Principal Investigators Dr. Virginia Pitzer, Dr. Daniel Weinberger, and Dr. William Boos for a project entitled “Consequences of climate change for risk of enteric infections: investigating links between hydrology and water-borne disease.” So far, this project has resulted in one published manuscript.

### Education

- ***Pre-doctoral Fellow***

Alyssa Parpia is the first pre-doctoral fellow supported by CCHI. She is interested in the mathematical modeling of infectious disease risks in relation to climate change and is affiliated with the Department of Epidemiology of Microbial Disease. Sappho Gilbert, our second pre-doctoral fellow, aims to focus her dissertation research on the effects of climate change on the health of indigenous Arctic communities.

- ***New Courses***

Two courses were taught by Dr. Dubrow:

- **Climate Change and Public Health (CDE 547a)** examines relationships between climate change and public health, including heat waves; occupational heat stress; air pollution; wildfires; aeroallergens; vector-borne, foodborne, and waterborne diseases; water scarcity; food security; migration; violent conflict; natural disasters; and health benefits of climate change mitigation.
- **Practicum in Climate Change, Sustainability, and Public Health (EPH 555b)** forms interdisciplinary student teams to carry out practical projects in the area of climate change, sustainability, and public health. Four projects were conducted: reducing automobile use for short workday trips by Yale employees; developing a healthy, sustainable, and tasty pizza for Yale events; improving beach closure policy and assessing the effects of climate change; and impact of reduction in unnecessary medical testing in a hospital clinic on carbon emissions.
- **Climate Change and Health Case Study**

We developed a web-based case study, entitled “The role of nuclear power in climate change mitigation in Connecticut,” in collaboration with Dr. Jaan Elias, Director of Case Study Research, Yale School of Management. Katherine Bagley, an environmental journalist, served as our case writer. It was taught in the environmental health sciences MPH core course, “EHS 510a, Principles of Environmental Health.”



*Millstone Nuclear  
Power Plant,  
Waterford, CT*

- **CCHI Student Associates Program**

This new program brings together students from across the University to attend CCHI talks and events and to participate in lunches to discuss issues related to climate change and health with invited speakers.

- **Climate Change and Health Summer Internships**

Three YSPH students received summer internship funding from CCHI:

- **Angela Lee:** Fish byproducts and iron availability at the Agricultural University of Athens
- **Elizabeth Moore:** Internship at the Public Health Institute’s Center for Climate Change & Health
- **Katherine Wolf:** Unconventional oil and gas disposal wells in the United States: an environmental justice impact analysis

## Major Plans for Year Three

**Faculty Recruitment:** YSPH Dean Sten Vermund has approved a national search for a faculty position in climate change and health; the successful candidate will serve as a core faculty member of CCHI.

**Public Health Practice:** We will seek funding to create a program that utilizes public health science to support legislative, litigative, regulatory, executive, community, and other efforts to mitigate or adapt to climate change and to achieve climate justice. It will include outreach and networking to identify appropriate partners; a student rapid response team to address public information needs in a timely manner; mechanisms for efficiently involving interested faculty; and development of best-practices.

**Online Certificate Program in Climate Change and Public Health:** The recognition of climate change as one of the leading public health challenges of this century has been relatively recent, such that most practicing public health professionals did not receive education about climate change and health during their training. A certificate program in climate change and public health would fill this gap.

**Climate Change Leader in Residence.** Dr. Nick Watts, Executive Director of the Lancet Countdown: Tracking Progress on Health and Climate Change and Director of the UK Health Alliance on Climate Change, will serve as the 2018 CCHI Climate Change Leader in Residence. He will also serve as keynote speaker for a CCHI-sponsored conference about environmental sustainability in clinical care.