

Health Impacts of Climate Change

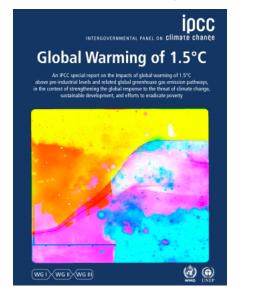
Wednesday, December 5, 2018 ACEEE Conference on Health, Environment, and Energy 5C. Protecting Health in a Changing Climate Rebecca Rehr, MPH

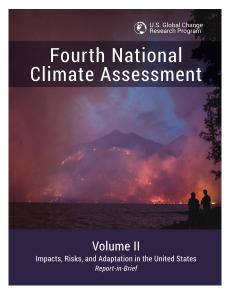
Presented at the 2018 Conference on Health, Environment and Energy

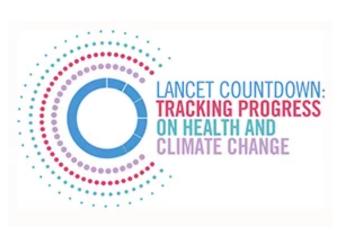


New Reports









NCA4 Health Chapter Key Message #1: Climate Change Affects the Health of All Americans

The health and well-being of Americans are already affected by climate change, with the adverse health consequences projected to worsen with additional climate change.







Temperature-Related Deaths

Climate change isn't just cooking the planet. It's cooking our workforce.



Workers trim leaves on Pinot Noir vines in Petaluma, Calif., in May. (Eric Risberg/AP)

By **David Arkush** and **David Michaels** July 19

Air Quality Impacts

- Increased pollution
 - Ozone and particulate matter
 - Burning fossil fuels
- Allergies
 - Longer pollen season
 - Increased pollen counts
- Indoor Environmental Quality



Extreme Events







Vector-Borne Diseases

- Climate change influences *mosquito* habitat and behavior
 - **Expanded** range ۲
 - Additional reproductive days
 - Increased reproductive rate ۲
 - Increased metabolism ۲
 - **Faster incubation**

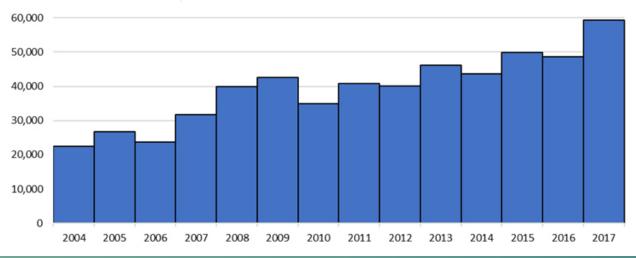


First Came the Hurricane. Now Come the Mosquitoes. CITYLAB

LINDA POON OCT 3, 2018

Heavy rains and flooding create ideal conditions for swarms. For public health officials, the focus is on curbing the potential for viruses to spread.

Total Reported Cases of *Tickborne* Disease, 2004–2017 (CDC, 2018)





Health Impacts of Climate Change

Food Safety, Nutrition, and Distribution

- Food supply chains will be disrupted during and following extreme weather events
- Rising CO₂ levels decrease amounts of protein and essential minerals in crops like wheat, rice, and potatoes

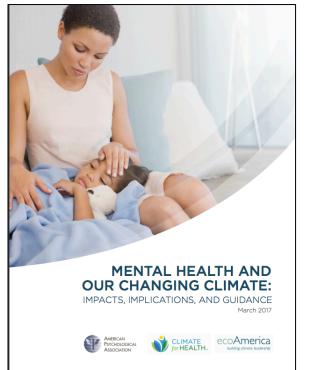
Water-Related Illness

- Increased water temperatures
- Increased runoff and storm surges



Mental Health and Well-being





KEY TAKEAWAYS: Impacts on Community and Society

- Decreased sense of cohesion
- Disrupted sense of continuity and belonging
- Increased interpersonal aggression, such as domestic abuse and crime
- Increased intergroup aggression, such as political conflict and war



Vulnerable Populations and Health Equity



EXPOSURE

Exposure is contact between a person and one or more biological, psychosocial, chemical, or physical stressors, including stressors affected by climate change.

SENSITIVITY

Sensitivity is the degree to which people or communities are affected, either adversely or beneficially, by climate variability or change.

ADAPTIVE CAPACITY

Adaptive capacity is the ability of communities, institutions, or people to adjust to potential hazards, to take advantage of opportunities, or to respond to consequences.

VULNERABILITY of Human Health to Climate Change

HEALTH IMPACTS

Injury, acute and chronic illness (including mental health and stress-related illness), developmental issues, and death

USGCRP, 2016



A CALL TO ACTION ON CLIMATE AND HEALTH

2018

Climate change is a global health emergency. It is impacting the health of our communities today. A growing number of health organizations around the world are taking climate action—from working on the front lines to take care of communities impacted by climate-related threats, to responding to health emergencies, to taking ambitious steps towards reducing the carbon footprint of our health systems. We must do more.

GLOBAL CLIMATE AND HEALTH FORUM



INITIAL ENDORSERS

INTERNATIONAL

C3 Collaborating for Health *(Global)* Canadian Association of Physicians for the Environment

Canadian Association of Nurses for Health and the Environment

Climate and Health Alliance of Australia Doctors for the Environment Australia German Climate and Health Alliance Global Climate and Health Alliance (Global) Health and Environment Alliance (Global) Health Care Without Harm (Global) Instituto Scientifico Biomedico Euro Mediterraneo (Italy)

UNITED STATES

Academy of Integrative Health and Medicine Alliance of Nurses for Healthy Environments American Academy of Allergy, Asthma and Immunology American Academy of Family Physicians American Academy of Pediatrics American College of Emergency Physicians, California American College of Physicians American College of Preventive Medicine American Lung Association American Medical Women's Association American Public Health Association Asthma and Allergy Foundation of America California Conference of Directors of **Environmental Health** California Department of Public Health Citizens' Climate Lobby Health Team Climate for Health. ecoAmerica **Climate Psychiatry Alliance Dignity Health** Florida Clinicians for Climate Action **Elorida State Medical Association**

International Federation of Medical Student Associations (*Global*) NCD Alliance (*Global*) OraTaiao NZ Climate & Health Council (*New Zealand*) Public Health Foundation of India Regional Institute of Health, Medicine and Research (*India*) UK Climate and Health Council UK Health Alliance on Climate Change World Federation of Public Health Associations (*Global*)

Health Professionals for a Healthy Climate (Minnesota) James Wilson Bridges MD Medical Society (Florida) James Sistrunk Medical Society (Florida) Kaiser Permanente Medical Advocates for Healthy Air (North Carolina) Medical Society Consortium on Climate and Health Minneapolis Health Department (Minnesota) Mom's Clean Air Force Multnomah County Health Department (Oregon) National Environmental Health Association National Medical Association Ohio Clinicians for Climate Action Physicians for Social Responsibility University of California. San Francisco Institute for Global Health Sciences US Climate and Health Alliance Vermont Climate and Health Alliance Virginia Clinicians for Climate Action







Climate for Health Declaration on 100% Clean Energy by 2030



CLIMATE for HEALTH

Thank You!

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