National Institute of Environmental Health Sciences

Global Environmental Health Day 2020

*Science at the Cutting Edge of
Global Environmental Change and Health*

Wednesday, July 1, 2020

National Institutes of Health • U.S. Department of Health and Human Services

GEH Day 2020: Science at the Cutting Edge of Global Environmental Change and Health

Table of Contents

Global Environmental Health Day 2020

Science at the Cutting Edge of Global Environmental Change and Health

Live Webinar • Wednesday, July 1, 2020

Session I

10:00 a.m. – 12:15 p.m.

Welcome: Rick Woychik, Ph.D., Director NIEHS and NTP

Opening: John Balbus, M.D., M.P.H., Senior Advisor for Public Health, NIEHS

Keynote Presentation: Howard Frumkin, M.D., Dr.P.H., Professor Emeritus of Environmental and Occupational Health Sciences, University of Washington School of Public Health

Panel: Health Threats and Opportunities Related to Climate Change
- Michelle Bell, Ph.D., Mary E. Pinchot Professor of Environmental Health, Yale School of Forestry and Environmental Studies and Yale School of Public Health
- Lindsey Smith Taillie, Ph.D., UNC-Chapel Hill Gillings School of Global Public Health
- Christina Chauvenet, Ph.D., UNC-Chapel Hill Gillings School of Global Public Health

12:15 – 1:00 p.m.

Break, optional interactive activity

Session II

1:00 – 3:00 p.m.

Opening: John Balbus, M.D., M.P.H., Senior Advisor for Public Health, NIEHS

Keynote Presentation: Kris Ebi, Ph.D., Professor of Global Health, Professor of Environmental and Occupational Health Sciences, University of Washington Center for Health and the Global Environment

Panel: Increasing Heat on Land and Sea: How to Protect Public Health
- Anwar Huq, Ph.D., Maryland Pathogen Institute, University of Maryland School of Public Health
- Julia Gohlke, Ph.D., Department of Population Health Sciences, Virginia Polytechnic Institute and State University

Closing

Bio Sketches

Welcome & Opening

Rick Woychik, Ph.D., Director, National Institute of Environmental Health Sciences
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Dr. Rick Woychik was named Director of the National Institute of Environmental Health Sciences and the National Toxicology Program on June 7, 2020, after serving as Deputy Director since 2011. He is a molecular geneticist with a Ph.D. in molecular biology from Case Western Reserve University and postdoctoral training with Dr. Philip Leder at Harvard Medical School. He spent almost 10 years at Oak Ridge National Laboratory rising in the ranks to become head of the Mammalian Genetics Section and then director of the Office of Functional Genomics. In August 1997, he assumed the role of vice chairman for research and professor in the Department of Pediatrics at Case Western Reserve University. In 1998, he moved to the San Francisco Bay area, first as the head of the ParkeDavis Laboratory for Molecular Genetics and then as chief scientific officer at Lynx Therapeutics. He returned to academics as the president and CEO of The Jackson Laboratory in August 2002 and served in that role until January 2011.

John M. Balbus, M.D., M.P.H., Senior Advisor for Public Health and Director, NIEHS-World Health Organization Collaborating Centre for Environmental Health Sciences
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John M. Balbus, M.D., M.P.H., is the Senior Advisor for Public Health to the Director of the National Institute of Environmental Health Sciences (NIEHS), where he directs the NIEHS-World Health Organization (WHO) Collaborating Centre for Environmental Health Sciences. He serves as HHS principal to the U.S. Global Change Research Program and also co-chairs working groups on Climate Change and Human Health for the U.S. Global Change Research Program and for the National Institutes of Health. Balbus has served as a lead author on health for the past two U.S. National Climate Assessments and a Review Editor for the 5th Assessment Report of the Intergovernmental Panel on Climate Change(IPCC). He is co-author of the Department of Human Health and Services (HHS) guide document "Primary Protection: Enhancing Health Care Resilience for a Changing Climate." Before joining NIEHS, Dr. Balbus was Chief Health Scientist for the non-governmental organization Environmental Defense Fund for seven years. He was also on the faculty of The George Washington University Schools of Medicine and Public Health and Health Services, where he was founding Director of the Center for Risk Science and Public Health and Acting Chairman of the Department of Environmental and Occupational Health. Dr. Balbus received his A.B. degree in Biochemistry from Harvard University, his M.D. from the University of Pennsylvania, and his M.P.H. from the Johns Hopkins School of Public Health.

Trisha Castranio, GEH Day Coordinator & Program Manager, NIEHS Global Environmental Health Program

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Trisha Castranio is a manager for the Global Environmental Health (GEH) program at the National Institute of Environmental Health Sciences and functions as the NC liaison to the Office of the Director in Bethesda. She manages the program's activities and projects as well as those for the WHO Collaborating Centre. She coordinates the annual Global Environmental Health Day as well as the Climate Environment and Health Seminar Series. She contributes to the GEH Newsletter and other program publications, has helped develop the NIEHS Climate Change and Human Health Literature Portal, is a committee member representing NIEHS for the US Group on Earth Observations (USGEO), the US Global Change Research Program's Climate Change and Human Health group (CCHHG) and the Federal Adaptation and Resilience Group (FARG), and the American Public Health Association's Environment Section. She also functions as the NIEHS Liaison to the Triangle Global Health Consortium. Her previous work includes writing the NIEHS's biannual Sustainability Report as well as fifteen years as a bench scientist in environmental health research. Ms. Castranio received her B.S. in Biochemistry and B.A. in Chemistry from North Carolina State University.

Session I Keynote

Howard Frumkin, M.D. Dr.P.H., Professor Emeritus of Environmental and Occupational Health Sciences, University of Washington, School of Public Health

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Howard Frumkin, a physician and epidemiologist, is Professor Emeritus of Environmental and Occupational Health Sciences at the University of Washington. Previously he was head of the Our Planet, Our Health initiative at the Wellcome Trust (2018-19), Dean of the University of Washington School of Public Health (2010-16), Director of the National Center for Environmental Health at the U.S. Centers for Disease Control and Prevention (2005-10), and Professor and Chair of Environmental and Occupational Health at Emory University (1990-2005). His research interests include health aspects of the built environment, climate change, energy policy, nature contact, and sustainability. His community and professional activities have included serving on numerous NASEM committees, on the Boards of the Bullitt Foundation, the Seattle Parks Foundation, the U.S. Green Building Council, Physicians for Social Responsibility, the Association of Occupational and Environmental Clinics, the American Public Health Association, and the National Environmental Education Foundation, on advisory committees to the Global Consortium on Climate and Health Education (Columbia University) and the Medical Society Consortium on Climate & Health (George Mason University), on the Steering Committee of the Planetary Health Alliance (Harvard University), on the National Toxicology Program Board of Scientific Counselors, and on the American Institute of Architects Design and Health Leadership Group. He is the author or co-author of over 250 scientific journal articles and chapters, and his nine books include Making Healthy Places: Designing and

Building for Health, Well-Being, and Sustainability (Island Press, 2011), Environmental Health: From Global to Local (Jossey-Bass, 3rd Edition 2016), and Planetary Health: Protecting Nature to Protect Ourselves (Island Press, 2020). He was educated at Brown (A.B.), Penn (M.D.), and Harvard (M.P.H. and Dr.P.H.). He is an avid cyclist, paddler, and hiker. He is married to global health journalist Joanne Silberner, and has two children, Gabe, an attorney, and Amara, a physician.

Panel: Health Threats and Opportunities Related to Climate Change

Michelle Bell Ph.D., Mary Pinchot Professor of Environmental Health, Yale School of Forestry and Environmental Studies and Yale School of Public Health
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Dr. Michelle Bell is the Mary E. Pinchot Professor of Environmental Health at the Yale University School of Forestry and Environmental Studies, with secondary appointments at the Yale School of Public Health, Environmental Health Sciences Division and the Yale School of Engineering and Applied Science, Department of Chemical and Environmental Engineering. Her research investigates how human health is affected by environmental conditions, such as atmospheric systems including air pollution and weather. Other research interests include the health impacts of climate change and environmental justice. Much of this work is based in epidemiology, biostatistics, and environmental engineering. The research is designed to be policy-relevant and contribute to well-informed decision-making to better protect human health and benefit society. She is the recipient of the Prince Albert II de Monaco / Institut Pasteur Award, the Rosenblith New Investigator Award, and the NIH Outstanding New Environmental Scientist (ONES) Award. Dr. Bell holds degrees from the Massachusetts Institute of Technology (B.S. in Environmental Engineering), Stanford University (M.S. in Environmental Engineering), and Johns Hopkins University (M.S.E. in Environmental Management and Economics and Ph.D. in Environmental Engineering). She is also completing a M.Sc. in philosophy (expected Aug. 2020).

Lindsey Smith Taillie Ph.D., UNC-Chapel Hill Gillings School of Global Public Health
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Dr. Lindsey Smith Taillie is a nutrition epidemiologist whose work focuses on evaluating food policy efforts in the US and globally, and how these influence disparities in diet and obesity. Her work uses a combination of randomized controlled trials and natural experimental studies using large datasets on food purchases and intake to evaluate and inform food policy to prevent obesity.

Internationally, current projects focus on evaluating sugary beverage taxes, front-of-package warning labels, and marketing restrictions in a number of Latin American countries, including Chile, Mexico, Colombia, Brazil, and Peru. These projects involve the collection and analysis of data on food purchases and intake as well as data on the food supply, such as product reformulation and food

marketing on television and on packages. The goal of these projects is to understand the real-world impact of policies on the food environment, food behavior, and ultimately, health outcomes.

In the US, her research focuses on changes in marketing and labeling of unhealthy foods and beverages, their association with the nutritional profile of food purchases and disparities in food purchases, and whether marketing and labeling policies can help consumers make healthier choices, especially in vulnerable populations such as Latino and low-income parents. Currently, Dr. Taillie is leading an RWJF-funded project to examine the impact of nutrition claims on racial-ethnic disparities in fruit drink purchases among parents. Along with colleagues in Health Behavior, she is also leading additional studies to develop and test the impact of pictorial warning labels and taxes on sugary beverage purchases and intake among Latino parents in North Carolina. As part of these projects, Dr. Taillie is developing the UNC Mini Mart, located at HPDP, which is designed to look like a real food store where people can buy and take home food and drinks for their families. The goal of the Mini Mart is to be able to design and test which types of food retail policies and interventions will encourage parents to make healthier choices.

Dr. Taillie is also leading a new Wellcome Trust-funded project to examine the impact of policies to reduce red and processed meat intake as a strategy to prevent climate change and reduce non-communicable disease. Dr. Taillie has also conducted a number of studies on the nutrition transition in China, including fieldwork on diet behaviors and diet assessment technology. She also conducts nutrition epidemiology studies on food behaviors, diet intake, and obesity using large population-level datasets such as the National Health and Nutrition Survey and American Time Use Study.

Dr. Taillie received her PhD in nutrition with a minor in epidemiology from UNC-Chapel Hill, her MPH with a concentration in social-behavioral sciences from Yale School of Public Health, and her BA in Sociology from Northwestern University.

Christina Chauvenet Ph.D., UNC-Chapel Hill Gillings School of Global Public Health
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Dr. Christina Chauvenet is a Postdoctoral Fellow in the Global Food Research Program. In this role, she primarily works on a Wellcome Trust-funded study on the intersection of diet and climate change under the direction of Dr. Lindsey Smith Taillie and Lindsay Jaacks. Christina is conducting experiments on the effects of warning labels on the purchase of red and processed meat. Christina received her PhD from the University of North Carolina Gillings School of Global Public Health in Maternal and Child Health with a minor in Health Behavior. She is interested in mixed methods approaches to inform food policy and health behavior. Christina has expertise in both research and practice in the area of federal nutrition programs, food insecurity, and local food systems. Before her PhD, Christina worked for Share Our Strength and Community Foodworks on food policy issues in Washington, DC.

Session II Keynote

Kris Ebi, Ph.D., Professor of Global Health, Professor of Environmental and Occupational Health Sciences, University of Washington Center for Health and the Global Environment

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Dr. Kristie L. Ebi has been conducting research and practice on the health risks of climate variability and change for nearly 25 years. Her research focuses on estimating current and future health risks of climate change; designing adaptation policies and measures to reduce the risks of climate change in multi-stressor environments; and estimating the health co-benefits of mitigation policies. She has supported multiple countries in assessing their vulnerability and implementing adaptation measures, in collaboration with WHO, UNDP, USAID, and others. Dr. Ebi's scientific training includes an M.S. in toxicology and a Ph.D. and MPH in epidemiology, and two years of postgraduate research at the London School of Hygiene and Tropical Medicine. She has edited four books on aspects of climate change and has more than 200 publications.

Panel: Increasing Heat on Land and Sea: How to Protect Public Health

Anwar Huq, Ph.D., University of Maryland, Maryland Pathogen Research Institute, and an affiliate at the School of Public Health

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Dr. Anwar Huq joined the Department of Microbiology in 1989 and currently, a Professor in the Maryland Pathogen Institute at the University of Maryland and an affiliate professor at the School of Public Health. He received BS in Zoology and MS in Marine Biology from the University of Karachi and Ph. D. in Microbiology from the University of Maryland, College Park. In his graduate study, Dr. Huq focused on the ecology of Vibrio cholerae and plankton, more specifically copepods, its host in the environment that lead to major findings in the survival, multiplication and transmission of this pathogen in the environment and also developed a method for disease reduction.

Dr. Huq's research interest includes understanding of pathogens, primarily the waterborne pathogens with goal of disease prevention and or intervention. Bacterial pathogens occurring naturally in the environment cannot be eradicated. Moreover, with global climate change, significant impact is expected on many of these pathogens. His work on the ecology, survival, transmission, and detection of V. cholerae assisted in developing prediction models for cholera where conventional microbiological, immunological, and molecular methods, including bioinformatics along with oceanography, limnology, and satellite remote sensing were used. Dr. Huq has also worked extensively on drinking water. His work on sari filtration for safe drinking water has proven to save

lives and reduced cased of cholera in Bangladesh. Dr. Huq has published over 240 papers in peer-reviewed journals, books, and proceedings, and presented over 100 invited talks around the world.

Dr. Huq is an elected Fellow of the American Academy of Microbiology (FAAM) in 1999. He received the 2019 Distinguished Scientist Award, University of Maryland at College Park, MD. He serves in numerous committees at universities, institutes, and professional societies, nationally and internationally.
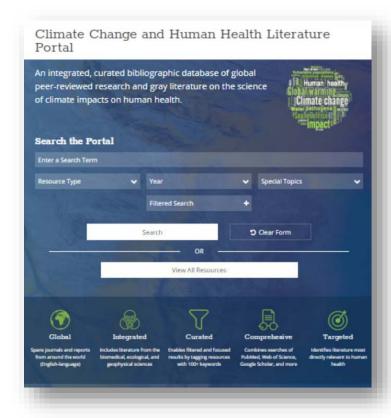
Julia Gohlke, Ph.D., Department of Population Health Sciences Virginia Polytechnic Institute and State University, Virginia Polytechnic Institute and State University
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Dr. Gohlke is an associate professor in the Department of Population Health Sciences at Virginia Tech. She has experience and training in toxicology, environmental epidemiology, and community-engaged approaches. She is currently conducting research using community-based and spatial epidemiology methods examining health outcomes associated with large-scale environmental changes and heat exposure across urban and rural landscapes in the Deep South and Central Appalachia. Dr. Gohlke received a bachelor's degree in biology from the University of Michigan, Ann Arbor, MI. She received an MS and PhD degree from the University of Washington, School of Public Health, Seattle, WA. She completed a postdoctoral fellowship at the National Institute of Environmental Health Sciences, served as an AAAS fellow in the Office of Global Change at the U.S. Department of State, and temporary scientific advisor at the World Health Organization.

NIEHS Climate Change and Human Health Literature Portal

NIEHS is excited to announce the release of its updated Climate Change and Human Health Literature Portal. This convenient knowledge management tool organizes a vast database of curated, global peer-reviewed research resources on climate change and human health. The Portal has been updated and expanded with new content and search and download features to help users across various disciplines, sectors, and knowledge levels to quickly access relevant literature for their needs and answer their questions about the human impacts of climate change.

The comprehensive database brings together biomedical and earth science literature, including more than 10,000 peer-reviewed articles, assessments, and scientific papers published between 2007 and 2019. Users have the opportunity to search by key terms or refine queries by using descriptive filters to generate results on specific exposures, health impacts, geographic locations and features, or other details. The Portal also includes papers covering special topics such as co-benefits of mitigation and adaptation and social justice within the context of climate change.

Search results are provided with abstracts, links to open-access or validated-source PDFs where available, and a resource description listing the curated tags and filters associated with the publication. Results can be saved and exported via a number of formats to facilitate user review, sharing via email and social media, and bibliometric analysis. Explore the Portal, and share your thoughts and feedback with the team.

https://tools.niehs.nih.gov/cchhl/

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