

Expert Consultation on the Effects of Climate Change on Children's Health

10 JULY 2014



HOSTED BY
President's Task Force on Children's Environmental
Health Risks and Safety Risks to Children
Subcommittee on Climate Change

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AGENDA

8:30 a.m. **Introduction**

- *Co-Chairs of the Senior Steering Committee of the President's Task Force—Khesha Reed, EPA and Sandra Howard, HHS*

Welcome

- *Harriet Tregoning, Director, Office of Economic Resilience, HUD*

Remarks

- *Michael Boots, Acting Chair, White House Council on Environmental Quality*

Remarks

- *Bob Perciasepe, Deputy Administrator, EPA*

Remarks

- *Howard Koh, Assistant Secretary for Health, HHS*

9:00 a.m. **Interagency Special Report on the Impacts of Climate Change on Human Health in the United States**

- *John Balbus, NIEHS*

9:15 a.m. **Session One: Thermal Extremes**

MODERATOR: *Marcus Sarofim, EPA*

- *Lyndsay Ammon Avalos, Kaiser Permanente Division of Research*
- *Julia Gohlke, University of Alabama at Birmingham*
- *Stefanie Sarnat, Emory University*
- *Perry Sheffield, Mount Sinai Medical Center*

Discussion

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10:15 a.m. **Session Two: Air Quality Impacts**

MODERATOR: *Susan Anenberg, EPA*

- *Meredith McCormack, Johns Hopkins University*
- *Frederica Perera, Columbia University*

Discussion

11:00 a.m. **Session Three: Water Quality and Waterborne Disease**

MODERATOR: *Juli Trtanj, NOAA*

- *Rita Colwell, University of Maryland*
- *Erin Lipp, University of Georgia*

Discussion

11:45 a.m. **Lunch**

1:00 p.m. **Session Four: Extreme Weather and Disasters/Mental Health and Stress**

MODERATOR: *Jesse Bell, NOAA*

- *Ruth Etzel, University of Wisconsin-Madison*
- *John Fairbank, Duke University*
- *Shao Lin, New York State Department of Health*
- *Jennifer Lowry, Children's Mercy Hospital*

Discussion

2:00 p.m. **Session Five: Food Availability, Safety, and Foodborne Disease**

MODERATOR: *Lewis Ziska, USDA*

- *Samantha Ahdoot, American Academy of Pediatrics*
- *Lynn Goldman, George Washington University*
- *Isabel Walls, USDA*

Discussion

2:45 p.m. **Session Six: Vectorborne and Zoonotic Disease**

MODERATOR: *Allison Crimmins, EPA*

- *Jonathan Patz, University of Wisconsin-Madison*

Discussion

3:15 p.m. **Break**

3:30 p.m. **Research Needs Discussion**

MODERATOR: *Janet Gamble, EPA*

- *All panelists*

4:30 p.m. **Taking Action to Protect Children's Health**

- *Linda Birnbaum, Director, NIEHS*
- *Joel Scheraga, Senior Advisor for Climate Adaptation, EPA*

4:50 p.m. **Next steps for the PTF Subcommittee on Climate and Health**

- *Sandra Howard, HHS*
- *Khesha Reed, EPA*

5:00 p.m. **Adjourn**

President's Task Force on Children's Environmental Health Risks and Safety Risks to Children



“ We must take action for our children and grandchildren’s sake, and we must work together to reduce risks from environmental exposure at home, school, and play areas. Through coordinated efforts like that of the President’s Task Force on Environmental Health Risks and Safety Risks to Children, my Administration will continue to empower Federal interagency collaboration to help ensure healthy homes and communities exist for our children. ”

—President Obama, proclaiming October 4, 2010 as Child Health Day

In April 1997, President Clinton issued *Executive Order 13045*, establishing the President’s Task Force on Environmental Health Risks and Safety Risks to Children. In 2010, the Obama Administration charged the Task Force with:

- Identifying priority issues of environmental health and safety risks to children that are best addressed through interagency efforts
- Developing strategies to protect children’s environmental health and safety
- Recommending and implementing interagency actions
- Communicating information to federal, state, and local decision makers for use in protecting children from environmental health and safety risks

The Secretary of the Department of Health and Human Services and the Administrator of the Environmental Protection Agency co-chair the Task Force, which comprises representatives of 17 federal departments and White House offices. A Steering Committee of senior staff coordinates interagency cooperation on the Task Force priority focus areas. To date, these include: asthma disparities, healthy homes, chemical exposures, and climate change.

Asthma Disparities

In May 2012, the President’s Task Force on Environmental Health Risks and Safety Risks to Children released the [Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities](#).

The goal of the *Action Plan* is to reduce the burden of asthma in minority children and those with family incomes below the poverty level. The plan promotes synergy and alignment across numerous federal programs. It emphasizes priority actions to address preventable factors that lead to asthma disparities.

The *Action Plan* is organized around four strategies:

- Reduce barriers to the implementation of guidelines-based asthma management
- Enhance capacity to deliver integrated, comprehensive asthma care to children in communities with racial and ethnic asthma disparities
- Improve capacity to identify the children most impacted by asthma disparities
- Accelerate efforts to identify and test interventions that may prevent the onset of asthma

Healthy Homes

Unhealthy and inadequate housing can disproportionately affect the health of children. In February 2013, the Federal Healthy Homes Work Group, under the guidance of the Task Force, released *Advancing Healthy Housing – A Strategy for Action*. The concept of a healthy home includes at least eight characteristics: dry, clean, pest-free, safe, contaminant-free, well ventilated, well maintained, and thermally controlled. The *Strategy for Action* aims to reduce the number of American homes with residential health and safety hazards through achievement of five goals and priority actions:

- Establish healthy homes recommendations
- Encourage adoption of healthy homes recommendations
- Create and support training and workforce development to address health hazards in housing, including by building a cadre of trained experts to deliver healthy homes services such as weatherization and retrofitting
- Educate the public about healthy homes
- Support research that informs and advances healthy housing in a cost-effective manner

Chemical Exposures

Children are not just “small adults.” Myriad factors, such as differences in metabolism; amount of air they breathe; food they eat and water they drink relative to weight; and their still developing bodies may increase the susceptibility of children to negative health effects from exposure to toxic agents. The Senior Staff Steering Committee is a forum for discussion and collaboration on issues related to children’s toxic exposures including:

- Childhood lead poisoning prevention and the health effects of low-level lead exposure
- Effects of endocrine disruptors, such as Bisphenol A, on children’s health and development
- Cumulative effects of exposures to phthalates on human reproduction and development
- Needs for biomonitoring data on very young children

Climate Change

Children are uniquely vulnerable to the effects of climate change. Federal agencies engaging in climate change mitigation and adaptation need to understand how children may be exposed and affected by the plethora of human health threats posed by climate change, including: heat waves, extreme weather, disasters, air and water quality changes, vectorborne and zoonotic diseases, and food quality and security issues. The Task Force has begun to explore these issues through a newly established subcommittee that aims to:

- Convene an expert consultation on climate change and children’s health
- Identify the needs of children to inform climate change mitigation, adaption, and resilience strategies
- Convene a federal community of practice around climate change impacts on children’s health

Task Force Members

- Department of Health and Human Services
- Environmental Protection Agency
- Department of Education
- Department of Labor
- Department of Justice
- Department of Energy
- Department of Housing and Urban Development
- Department of Agriculture
- Department of Transportation
- Department of Homeland Security
- Office of Management and Budget
- Council on Environmental Quality
- Consumer Product Safety Commission
- Assistant to the President for Economic Policy
- Assistant to the President on Domestic Policy
- Office of Science and Technology Policy
- Council of Economic Advisors

SPEAKER BIOS

Expert Consultation on the Effects of Climate Change on Children's Health

Samantha Ahdoot, M.D.

Dr. Ahdoot has been Board Certified with the American Board of Pediatrics and a Fellow of the American Academy of Pediatrics (AAP) since 2002. She is currently a partner at Pediatric Associates of Alexandria, where she practices as a general pediatrician. She is an Attending Physician at Inova Alexandria and Fairfax Hospitals, as well as the Secretary of the Pediatric Department of Alexandria Hospital. Dr. Ahdoot has been recognized in multiple editions of the Washingtonian Magazine's Best Doctors magazine, most recently in 2014.

Dr. Ahdoot has a strong interest in the interactions between environmental and child health. She is a member of the Executive Committee of the AAP's Council on Environmental Health. She is a spokesperson for the AAP on climate change impacts on children and has provided testimony on behalf of the AAP at EPA hearings. Dr. Ahdoot is the lead author of the AAP's forthcoming updated Technical Report on Climate Change and Child Health, currently in development, and is speaking on behalf of the AAP at the July 10th Expert Consultation on Climate Change and Children's Health.

Dr. Ahdoot earned a Bachelor's Degree in English from Wesleyan University, CT, her Medical Degree from Georgetown University School of Medicine, and completed her residency in Pediatrics at Tufts University in Boston.

Susan Anenberg, Ph.D.

Susan Anenberg is an environmental scientist in the Health and Environmental Impacts Division of EPA's Office of Air Quality Planning and Standards. She is co-leading the National Climate Assessment Special Report on Climate Change and Human Health chapter on air quality. At EPA, Susan estimates air pollution-related health risks and benefits to support air quality rules and regulations. She has published several articles on the impacts of climate change on air quality and pollution-related health effects as well as the potential climate and air quality co-benefits of mitigation strategies. Susan received a PhD from University of North Carolina and BA from Northwestern University.

Lyndsay Avalos, Ph.D., M.P.H.

Lyndsay Ammon Avalos, PhD, MPH, is a research scientist at the Kaiser Permanente Northern California Division of Research. She holds a bachelor's degree in animal physiology and neuroscience from UC San Diego, an MPH from Boston University and a PhD in Epidemiology from UC Berkeley. She was an NIAAA predoctoral fellow through the training program at the Alcohol Research Group in Emeryville, CA and UC Berkeley's School of Public Health. Currently, Dr. Avalos is a Building Interdisciplinary Research Careers in Women's Health (BIRCWH) K12 Scholar, through Kaiser Permanente's Division of Research and UC San Francisco's joint program. Dr. Avalos's current research focuses on the impact of environmental exposures and behavioral factors during pregnancy on reproductive, perinatal and pediatric outcomes. She is a Principal Investigator of a NIEHS-funded study assessing the impact of climate change on preterm birth. Additionally, through the competitive NIH Loan Repayment Program for Health Disparities Research, Dr. Avalos also devotes part of her time studying health disparities in reproductive and perinatal outcomes.

John Balbus, M.D.*

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, serving as a key NIEHS liaison to its external constituencies and leading NIEHS efforts on global environmental health and climate change. In this capacity, 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 US Global Change Research Program and for the National Institutes of Health. Balbus was a lead author for the health chapter of the 3rd US National Climate Assessment and contributed the section on vulnerable populations to Synthesis and Assessment Product 4.6, the health and human systems monograph of the 2nd National Climate Assessment.

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.

**indicates Subcommittee on Climate Change members*

Jesse Bell, Ph.D.

Dr. Jesse Bell is a research scientist at NOAA's Cooperative Institute for Climate and Satellites –NC, a Guest Researcher at the Centers for Disease Control and Prevention, and Adjunct Assistant Professor for Rollins School of Public Health at Emory University.

While working on his doctorate at the University of Oklahoma, Dr. Bell held an NSF EAPSI Fellowship and NSF GK-12 Fellowship that provided opportunities to perform environmental research in China and Thailand. Since joining CICS-NC in 2010, he has worked at NOAA's National Climatic Data Center to better understand issues related to climate change and drought monitoring. Working under an MOU between NOAA and CDC, he is located part-time at CDC's Climate and Health Program and performs research on a variety of health issues related to environmental exposures (such as heat exposure, valley fever, and traffic accidents related to precipitation). He also provides scientific guidance to state and city health departments that are funded by CDC to develop strategies to confront health implications of climate change.

In addition, Dr. Bell is an author and chapter lead for the U.S. National Climate Assessment Interim Special Report on Climate and Health. He is also a graduate mentor for Masters of Public Health students from Emory University on projects related to climate and health.

Martha Berger*

Martha Berger works in the Office of Children's Health Protection at the US Environmental Protection Agency in Washington DC. Though she has worked in Washington for over 25 years, she still calls New Orleans home. In the children's health office, Martha can be found juggling international and domestic issues, health care provider education, climate change, prenatal health, outreach, education and any number of other topics. Martha has a bachelor of arts in Urban Studies from Vanderbilt University and a Masters in Public Administration from the University of New Orleans. She was determined to pursue a career in public service from a very early age, and finds environmental health issues endlessly fascinating.

**indicates Subcommittee on Climate Change members*

Linda Birnbaum, Ph.D., M.S.

Linda S. Birnbaum, Ph.D., became the Director of the National Institute of Environmental Health Sciences (NIEHS), one of the National Institutes of Health (NIH), and the National Toxicology Program (NTP) on January 18, 2009. In these roles Birnbaum oversees federal funding for biomedical research to discover how the environment influences human health and disease. Several advisory boards and councils provide Birnbaum and NIEHS/ NTP staff with input to accomplish this large task. Birnbaum is the first toxicologist and the first woman to lead the NIEHS/ NTP. She has spent most of her career as a federal scientist. Birnbaum's own research and many of her publications focus on the pharmacokinetic behavior of environmental chemicals, mechanisms of actions of toxicants, including endocrine disruption, and linking of real-world exposures to health effects. Birnbaum has received numerous awards and recognitions, including being elected to the Institute of Medicine of the National Academies, in October 2010, one of the highest honors in the fields of medicine and health. Birnbaum also finds time to mentor the next generation of environmental health scientists. For example, she serves as adjunct professor in the Gillings School of Global Public Health, the Curriculum in Toxicology, and the Department of Environmental Sciences and Engineering at the University of North Carolina at Chapel Hill, as well as in the Integrated Toxicology Program at Duke University. A native of New Jersey, Dr. Birnbaum received her M.S. and Ph.D. in microbiology from the University of Illinois at Urbana-Champaign.

Michael Boots, M.P.A.

Mike Boots is Acting Chair of the White House Council on Environmental Quality (CEQ). CEQ helps to develop the Administration's environmental and energy policies and initiatives and works closely with Federal agencies to implement them. Prior to assuming his role as Acting Chair, Mike served as the Chief of Staff at CEQ. In this capacity, he helped coordinate the Administration's work on the President's Climate Action Plan, the establishment of new national monuments that permanently protect unique American sites, the development of the Nation's first comprehensive National Ocean Policy, and the President's federal sustainability initiative to reduce energy use and pollution across the Federal Government, among other environmental priorities. At the start of the Obama Administration, he served as an Associate Director managing the natural resources portfolio at CEQ, focusing on protecting and conserving the nation's special places, landscapes, freshwater resources and oceans.

During his career, Mike has worked extensively with broad coalitions of U.S. and European businesses, governments and public interest groups on a wide array of environmental policies and conservation programs. Prior to joining CEQ, Mike was the Vice President for Sustainable Markets at SeaWeb, where he led efforts to engage the private sector – from the seafood industry to the shipping sector – in finding innovative solutions to ocean conservation challenges. He served at the U.S. Environmental Protection Agency during the Clinton Administration and at a public affairs firm managing a statewide energy conservation campaign during California's energy crisis. He later served in Washington, DC as the Environmental and Natural Resources Advisor to the Governor of California, representing the Governor, his cabinet and the state before Congress and the Federal government.

Mike received an M.P.A. from the Maxwell School of Public Affairs at Syracuse University and a B.A. in Communications from the University of California Los Angeles.

Rita Colwell, Ph.D., M.S.

Dr. Rita Colwell is Distinguished University Professor both at the University of Maryland at College Park and at Johns Hopkins University Bloomberg School of Public Health, Senior Advisor and Chairman Emeritus, Canon US Life Sciences, Inc., and President and Chairman of CosmosID, Inc. Her interests are focused on global infectious diseases, water, and health, and she is currently developing an international network to address emerging infectious diseases and water issues, including safe drinking water for both the developed and developing world, in collaboration with Safe Water Network, headquartered in New York City.

Dr. Colwell served as the 11th Director of the National Science Foundation, 1998-2004. In her capacity as NSF Director, she served as Co-chair of the Committee on Science of the National Science and Technology Council. One of her major interests include K-12 science and mathematics education, graduate science and engineering education and the increased participation of women and minorities in science and engineering.

Born in Beverly, Massachusetts, Dr. Colwell holds a B.S. in Bacteriology and an M.S. in Genetics, from Purdue University, and a Ph.D. in Oceanography from the University of Washington.

Allison Crimmins, M.S., M.P.P.

Allison Crimmins is an environmental scientist in EPA's climate change division in the Office of Air and Radiation. She is helping to coordinate the Interagency Special Report on the Impacts of Climate Change on Human Health in the United States. In addition to her work on climate change and health, Allison also works on the EPA climate indicators report, mitigation benefits modeling, and other projects focused on the science and impacts of climate change. Allison has a Masters of Science in Paleoceanography and a Masters of Public Policy in International and Global Affairs from the Harvard Kennedy School. Previous to joining the EPA, she worked as a communications manager for MIT's joint program on the science and policy of global change.

Ruth Etzel, M.D., Ph.D.

Dr. Etzel is an internationally recognized pediatrician, environmental epidemiologist, and preventive medicine specialist. She performed the first study to document that children with secondhand exposure to tobacco smoke had measurable exposure to nicotine and cotinine. Her pioneering work led to nationwide efforts to reduce indoor exposures to tobacco, including the ban on smoking in US airliners. She also produced the first research to show that exposures to toxigenic molds in the home could be dangerous to infants' health.

She was a Robert Wood Johnson Clinical Scholar at the University of North Carolina at Chapel Hill, where she earned her PhD in Epidemiology. At CDC, she completed the Epidemic Intelligence Service Program and Preventive Medicine residency and then founded and directed the Air Pollution and Respiratory Health Branch. She founded the American Academy of Pediatrics Section on Epidemiology and chaired it from 1988 to 1992. She chaired the American Academy of Pediatrics Committee on Environmental Health from 1995 to 1999. In 2005, with funding from the US EPA, she founded the International Pediatric Environmental Health Leadership Institute. This Institute is developing a global group of pediatricians with expertise in recognizing, diagnosing, preventing, and managing pediatric diseases linked to environmental factors. From 2009 – 2012 at the World Health Organization in Geneva, she led the programmatic activities on child health and the environment. In 2010 she was elected to the Collegium Ramazzini, an independent, international academy comprised of 180 internationally renowned experts in the fields of occupational and environmental health. She is the editor of *Pediatric Environmental Health*, a handbook for doctors who care for children. She co-edited (with Dr. Philip Landrigan) the *Textbook of Children's Environmental Health*, published by Oxford University Press in 2014.

John A. Fairbank, Ph.D.

John A. Fairbank, Ph.D., is Professor in the Department of Psychiatry and Behavioral Sciences at Duke University. He is Co-Director for the SAMHSA-sponsored National Center for Child Traumatic Stress (NCCTS), co-located at UCLA and Duke University, and Director of the VA Mid-Atlantic (VISN 6) Mental Illness Research, Education and Clinical Center (MIRECC) at the VA Medical Center, Durham, NC. He is one of the Principal Investigators for the DoD-sponsored Millennium Cohort Family Study. Previously, he served as Senior Research Clinical Psychologist at RTI International, and Assistant to Associate Professor at the University of Mississippi. Academically, he received an AB from Rutgers University and a MS and Ph.D. in clinical psychology from Auburn University. Among his awards and honors include the Outstanding Professional Award from the American Professional Society on the Abuse of Children, and the Robert S. Laufer Ph.D. Memorial Award for Outstanding Scientific Achievement in the Field of Posttraumatic Stress Disorder (PTSD) from the International Society for Traumatic Stress Studies. He has authored or co-authored over 100 scientific publications, primarily addressing epidemiological and clinical issues related to traumatic stress in adults and children.

Janet L. Gamble, Ph.D.*

Janet L. Gamble, Ph.D., is an economist at the U.S. Environmental Protection Agency's Global Change Research Program in the Office of Research and Development. At the EPA, she is engaged in research and assessment activities related to the impacts of climate change on human health, human settlements and human well-being, including: assessments of the vulnerability of certain subpopulations to climate change (especially older adults and children); analyses of the relationship between extreme temperature and violent behavior and implications of climate change; quality of life effects associated with the impacts of climate change on vector-borne diseases; and impacts of climate change on aeroallergens and on related morbidity and mortality. Dr. Gamble served as the Convening Lead Author for the U.S. Climate Change Science Program's (CCSP) Synthesis and Assessment Product 4.6: Analyses of the Impacts of Global Change on Human Health and Welfare and Human Systems (2008). From 2000-2006, Dr. Gamble was chair of the Interagency Working Group on Human Dimensions at the U.S. Global Change Research Program. Dr. Gamble completed her doctorate in political economy at the University of Texas at Dallas in 1997. She was an EPA STAR Doctoral Fellow at UT Dallas, and taught health economics and econometrics. She completed a post-doctoral fellowship at the Tulane University Medical School (1997-1998) and joined EPA in 1998 as a STAR Post-Doctoral Fellow.

Julia Gohlke, Ph.D.

Julia Gohlke is an Assistant Professor of Environmental Health Sciences at the University of Alabama - Birmingham (UAB). She received a B.S. in Biology from the University of Michigan and an M.S. and Ph.D. in environmental health from the University of Washington. She has a background in computational and bioinformatics approaches in risk assessment and toxicology. She and her research team have evaluated associations between extreme heat events and adverse birth outcomes and non-accidental death in urban versus rural settings in Alabama between 1990 and 2010. They have looked at a variety of heat wave definitions currently in use. They are also working with community organizations to establish environmental health priorities and measure personal heat exposure across urban and rural environments.

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Lynn R. Goldman, M.D., M.S., M.P.H.

Lynn R. Goldman, a pediatrician and an epidemiologist, is the Michael and Lori Milken Dean of George Washington University Milken Institute School of Public Health. Formerly she was a Professor at the Johns Hopkins University Bloomberg School of Public Health Department of Environmental Health Sciences. In 1993, Dr. Goldman was appointed by the President and confirmed by the Senate to serve as Assistant Administrator (AA) for the US Environmental Protection Agency, where she directed the Office of Chemical Safety and Pollution Prevention (OCSPP) from 1993 through 1998.

Dr. Goldman has a BS in Conservation of Natural Resources, an MS in Health and Medical Sciences from the University of California, Berkeley, an MPH from the Johns Hopkins Bloomberg School of Public Health, and an MD from the University of California, San Francisco. She completed pediatric training at Children's Hospital, Oakland, California and is board-certified in pediatrics.

Sandra Howard*

Sandra N. Howard is the Senior Environmental Health Advisor in the Office of the Assistant Secretary for Health (OASH), U.S. Department of Health and Human Services (HHS). She is the team leader for the OASH Environmental Health Unit. She co-chairs the Senior Staff Steering Committee of the President's Task Force on Environmental Health Risks and Safety Risks to Children. She also co-chairs the HHS Environmental Justice Working Group and represents HHS on the Environmental Justice Federal Interagency Working Group.

Ms. Howard has over 30 years of experience in the development and coordination of federal science policy. Prior to joining OASH, she served for twenty years as a senior policy analyst in HHS's Office of Science and Data Policy. She was the lead analyst for policy issues related to biomedical research and environmental health. She began her career at the National Institutes of Health (NIH), holding positions in budget, legislation and other policy and administrative areas. From there, she went to work for the Appropriations Committee of the U.S. House of Representatives. She later returned to NIH to help establish the Office of Minority Programs (now the National Institute on Minority Health and Health Disparities).

Ms. Howard is a graduate of Yale College and has completed graduate level course work in public health, including environmental health and health services administration.

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Lesley Jantarasami*

Lesley Jantarasami works in the Climate Change Division of the U.S. EPA's Office of Air and Radiation. Her focus is synthesizing and leveraging information on climate change science, impacts, and the associated risks to human health and the environment to inform policy and communicate science to the public and other audiences. Lesley also serves as the Division's environmental justice and tribal coordinator, managing projects to assess and communicate climate change risks to minority, low-income, and/or indigenous populations, as well as to facilitate climate adaptation planning in tribal communities.

Howard Koh, M.D., M.P.H.

Dr. Howard K. Koh is the Assistant Secretary for Health for the U.S. Department of Health and Human Services. He oversees 14 core public health offices — including the Office of the Surgeon General and the US Public Health Service Corps — as well as 10 regional health offices across the nation and 10 Presidential and Secretarial advisory committees. As the Assistant Secretary for Health, he is dedicated to the mission of creating better public health systems for prevention and care so that all people can reach their highest attainable standard of health.

A former Commissioner of Public Health for the Commonwealth of Massachusetts, Dr. Koh was also a professor and associate dean for Public Health Practice at the Harvard School of Public Health, as well as Director of the Harvard School of Public Health Center for Public Health Preparedness.

A graduate of Yale College (where he was president of the Glee Club) and Yale School of Medicine, Dr. Koh also has a Master's Degree in Public Health from Boston University and is board-certified in four specialties. He has published more than 200 articles in the medical and public health literature and is the recipient of numerous awards for accomplishments in medicine and public health.

**indicates Subcommittee on Climate Change members*

Shao Lin, M.D., Ph.D.

Dr. Shao Lin is the Research Director of the Bureau of Environmental and Occupational Epidemiology, New York State Dept. of Health (NYSDOH) and a Professor at both the Dept. of Environmental Health Science and the Dept. of Epidemiology and Biostatistics, University at Albany, NY. Dr. Lin has over 20 years of experience in designing / directing various environmental studies, children's health studies, climate change studies, and education/training in both medicine and public health. As a Principle Investigator (PI), she has directed studies assessing health impacts of various environmental exposures including climate/weather factors, air pollution, heavy traffic exposure, residential exposure to urban air toxics from outdoor/indoor sources, health effects among residents living near Ground Zero after the World Trade Center disaster, and a series of projects assessing the impact of school environment on childhood asthma, absenteeism, and student performance.

Erin Lipp, Ph.D.

Dr. Lipp is an environmental microbiologist who has worked on issues of microbial ecology, water quality, and waterborne disease for over 15 years. She has a PhD in Marine Science from the University of South Florida and completed a post-doctoral fellowship in biotechnology at the University of Maryland Center of Marine Biotechnology, before arriving at the University of Georgia in 2002. Dr. Lipp is currently a professor and the graduate coordinator in the Dept. of Environmental Health Science. Dr. Lipp's primary research focus is the ecology of human pathogens in coastal waters and the role of environmental exposures in disease transmission. Her research incorporates molecular biology, microbial ecology, epidemiology and climate research to better understand the fate of bacteria and viruses introduced from wastewater to aquatic environments and their potential for transmission to humans and other hosts. She is also works with toxicologists to evaluate the combined effects of chemical contaminants on microbial (pathogen) persistence in the environment. Dr. Lipp has also worked with the IPCC and USGCRP on assessing impacts of climate change on human health, especially water and foodborne disease.

Jennifer Lowry, M.D.

Jennifer Lowry attended medical school at the University of South Dakota School of Medicine in Vermillion and Rapid City, South Dakota. Subsequently, she completed a Pediatric Residency and Clinical Pharmacology/Medical Toxicology Fellowship at the Children's Mercy Hospital and Clinics in Kansas City, MO. She is board certified in Pediatrics and Medical Toxicology. She spent 5 years at the University of Kansas Medical Center as the Medical Director to the University of Kansas Hospital Poison Control Center. Currently, she is the Chief for the Section of Clinical Toxicology at Children's Mercy Hospital and an Associate Professor in Pediatrics at the University of Missouri – Kansas City School of Medicine. She continues to serve as a toxicologist for the KUH-PCC.

Dr. Lowry has served as the Director for the Mid-America Pediatric Environmental Health Specialty Unit for EPA Region 7 (Iowa, Kansas, Missouri and Nebraska) since its inception in 2002 and as a medical toxicology liaison to the Region 7 Agency for Toxic Substances and Disease Registry. She is a current member of the Children's Health Protection Advisory Committee for the Environmental Protection Agency and the Executive Committee for the American Academy of Pediatrics' Council on Environmental Health.

Meredith McCormack, M.D., M.H.S.

Meredith C McCormack, MD, MHS, is Assistant Professor of Medicine in the Division of Pulmonary and Critical Care Medicine at Johns Hopkins with a joint appointment in the Department of Environmental Health Sciences at the Johns Hopkins Bloomberg School of Public Health. She also serves as the Medical Director of the Johns Hopkins University Pulmonary Function Laboratory and sits on the ATS standards committee for Pulmonary Function Testing with expertise in pulmonary physiology. She is an environmental epidemiologist and pulmonologist with a research focus on the effects of climate change on human health. She is funded by the National Institute of Environmental Health Sciences and the Environmental Protection Agency to investigate the effects of extreme heat, air pollution, and dietary exposure on populations with underlying obstructive lung disease, including children with asthma and adults with COPD.

Jonathan Patz, M.D., M.P.H.

Jonathan Patz is Professor and Director of the Global Health Institute at the University of Wisconsin in Madison. He co-chaired the health expert panel of the US National Assessment on Climate Change and was a convening lead author for the United Nations/World Bank Millennium Ecosystem Assessment. For the past 15 years, Dr. Patz has been a lead author for the United Nations Intergovernmental Panel on Climate Change (or IPCC) – the organization that shared the 2007 Nobel Peace Prize with Al Gore. Dr. Patz has written over 90 peer-reviewed scientific papers, a textbook addressing the health effects of global environmental change, and most recently, a co-edited five-volume Encyclopedia of Environmental Health (2011).

Dr. Patz earned medical board certification in both Occupational/Environmental Medicine and Family Medicine and received his medical degree from Case Western Reserve University (1987) and his Master of Public Health degree (1992) from Johns Hopkins University.

Bob Perciasepe, M.P.A., M.P.L.

Appointed by President Obama in 2009 as the U.S. Environmental Protection Agency’s Deputy Administrator, Bob Perciasepe continues a career spanning nearly four decades as one of the nation’s leading environmental and public policy figures. An expert on environmental stewardship, advocacy, public policy, and national resource and organizational management, Perciasepe is widely respected within both the environmental and U.S. business communities.

His extensive experience includes service both inside and outside of government. He served as a top EPA official in the administration of President Bill Clinton, who appointed him, first, to serve as the nation’s top water official and later as the senior official responsible for air quality across the U.S. Prior to being named to his current position, he was chief operating officer at the National Audubon Society, one of the world’s leading environmental organizations. He has also held top positions within state and municipal government, including as Secretary of the Environment for the State of Maryland and as a senior official for the City of Baltimore.

Perciasepe holds a Bachelor of Science degree in Natural Resources from Cornell University and a master’s degree in planning and public administration from the Maxwell School of Syracuse University.

Frederica Perera, Dr.P.H., Ph.D.

Dr. Perera is a Professor at Columbia University's Mailman School of Public Health, where she serves as Director of the Columbia Center for Children's Environmental Health. Dr. Perera is internationally recognized for pioneering the field of molecular epidemiology, utilizing biomarkers to understand links between environmental exposures and disease. Currently, she and her colleagues are applying advanced molecular and imaging techniques within longitudinal cohort studies of pregnant women and their children, with the goal of identifying preventable risk factors for developmental disorders, asthma, obesity and cancer in childhood. Her areas of specialization include prevention of environmental risks to children, molecular epidemiology, disease prevention, environment-susceptibility interactions, and risk assessment. She is the author of over 300 publications, including 270 peer reviewed articles, and has received numerous honors, including: First Irving J. Selikoff Cancer Research Award, The Ramazzini Institute (1995); Newsweek, The Century Club Award (1997); First Children's Environmental Health Award, The Pew Center for Children's Health and the Environment (1999); Distinguished Lecturer, National Cancer Institute, Occupational and Environmental Cancer (2002); Doctoris Honoris Causa, Jagiellonian University, Krakow, Poland (2004); Children's Environmental Health Excellence Award, U.S. Environmental Protection Agency (2005); and CEHN (Children's Environmental Health Network) Award (2008).

Khesha Reed, M.S.*

Khesha Reed is the Acting Director of the Office of Children's Health Protection at the United States Environmental Protection Agency (EPA). She previously held the Associate Director position. The office is responsible for ensuring that all EPA decisions are protective of children's health and that EPA is an international leader on children's environmental health issues. Khesha has led the office's strategic planning activities and is currently the co-chair of the senior steering committee of the Presidential Task Force on Environmental Health Risks and Safety Risks to Children.

Her prior experience at the EPA was with the Office of Transportation and Air Quality as the Manager of the Heavy-Duty and Nonroad Engine Group. Mrs. Reed managed the certification program for heavy-duty highway and nonroad engines and ensured that engines were compliant with emissions regulations throughout their useful lives. She also served as the Director of the Center for Radiation Information in the Office of Radiation and Indoor Air.

Khesha received her B.S. in Civil Engineering from the University of Delaware and her M.S. in Environmental Engineering from Johns Hopkins University.

**indicates Subcommittee on Climate Change members*

Stefanie Sarnat, Ph.D., M.S.

Dr. Stefanie Ebel Sarnat is Assistant Professor of Environmental Health at the Rollins School of Public Health of Emory University in Atlanta, GA. Dr. Sarnat's research focuses on assessing exposures and corresponding health effects of urban air quality. She currently leads several time-series studies, with specific interests in assessing the impacts of air pollution, meteorological conditions, and weather extremes on health care utilization. Dr. Sarnat's work on thermal extremes includes assessment of summertime ambient temperatures on emergency department visits for heat-related illness, renal, and cardiorespiratory outcomes in Atlanta, with a particular interest in understanding effects in children and the elderly. She also conducts a multi-city time-series study funded by the US Environmental Protection Agency as part of the Clean Air Research Centers program. Her work on this study and related projects focuses on assessment of health relevant ambient air pollution mixtures, examination of the impacts of exposure measurement error on observed epidemiological findings, and assessing exposure and population factors that may modify health risk. Dr. Sarnat's studies also include prospective panel-based designs, using detailed field investigation methods to further understand air pollution exposure factors and health effects among susceptible and vulnerable populations. Dr. Sarnat has previously participated as an expert peer reviewer of drafts of USEPA Integrated Science Assessments. She also recently served on the National Research Council's committee on urban meteorology and the Health Effects Institute review panel on ultrafine particles. Dr. Sarnat holds a Master of Science degree from the University of British Columbia in 2000 and a doctorate from the Harvard School of Public Health in 2005.

Marcus Sarofim, Ph.D.

Marcus Sarofim is an environmental scientist in the Climate Science & Impacts Branch in the Climate Change Division at the US EPA. His portfolio includes projecting mortality within the United States due to climatically driven changes in thermal extremes, addressing short-lived climate forcers (especially their contributions to Arctic climate change), and climate science communication efforts generally.

Prior to his time at EPA, Marcus was a AAAS (American Association for the Advancement of Science) Science & Technology Policy Fellow, and before that he earned his PhD at MIT using computer models to study the implications for both climate and economic systems of different ways to include various gases (like carbon dioxide and methane) within one climate policy.

Joel Scheraga, Ph.D., M.A.

Dr. Joel D. Scheraga is the Senior Advisor for Climate Adaptation in the Office of Policy in the Office of the Administrator at the U.S. Environmental Protection Agency (EPA). He is leading EPA's efforts to adapt to climate change to ensure the Agency continues to protect human health and the environment even as the climate changes. He led the development of EPA's new Climate Change Adaptation Plan and is now overseeing implementation of the Plan. A central element of EPA's efforts is to build and strengthen the adaptive capacity of states, tribes, and local communities.

Dr. Scheraga was on the team that produced President Obama's Climate Action Plan that was released in June 2013. He chairs the Agency Adaptation Work Group for the Council on Climate Preparedness and Resilience, which was established by the President under Executive Order in November 2013. The Work Group supports the development and implementation of adaptation plans by all federal agencies.

Dr. Scheraga received an A.B. degree in geology-mathematics/physics from Brown University in 1976, an M.A. in economics from Brown University in 1979, and a Ph.D. in economics from Brown University in 1981. He was also a Lead Author for the Intergovernmental Panel on Climate Change (IPCC), which was awarded the 2007 Nobel Peace Prize.

Perry Sheffield, M.D.

Dr. Perry Sheffield is an Assistant Professor in Preventive Medicine and Pediatrics at the Icahn School of Medicine at Mount Sinai in New York City. She completed a residency in Pediatrics at Johns Hopkins University followed by a fellowship in Pediatric Environmental Health at Sinai. She is Deputy Director of the U.S. EPA Region 2 Pediatric Environmental Health Specialty Unit. Her research focuses on both identifying the projected health effects of climate change and developing adaptation strategies with a particular focus on vulnerable populations specifically children. Current projects include examining air pollution and heat impacts in New York City and an adaptation project in Gujarat, India.

Jeffrey Stiefel, Ph.D., M.S.*

Dr. Jeffrey Stiefel is the Senior Coordinator for Climate Change and Health Resilience within the Department of Homeland Security's (DHS) Office of Health Affairs (OHA), Health Threats Resilience Division. In this role, Dr. Stiefel provides guidance and direction for the development of a National Community Health Resilience Framework and the health effects of climate change. The Framework will coordinate and integrate our Nations Community Health resilience activities in cooperation with Federal, State/ regional/Local and Tribal partners, as well as leaders within the Private Sector, Educational Institutions and NGO's. He was recently on detail to the DHS Office of Resilience Policy and assisted the Senior Counselor to the Secretary on updating the DHS Climate Change Action Plan. His previous assignments within OHA were Director of the National Biodefense Architecture (NBA) and the Director of the Early Detection Division and Program Executive for BioWatch where he served as the senior acquisition professional for OHA Chemical and Biological systems and had oversight of the nation's civilian biomonitoring effort, and the Rapidly Deployable Chemical Detection System (RDCDS) program.

Dr. Stiefel retired from the United States Army in 2004 after 31 years of service. He completed a B.A. in Biology from Hood College, an M.S. in Microbiology from the University of Alabama and a Ph.D. in Biology (Molecular Genetics) from Boston College. In 2006, Dr. Stiefel received the DHS Secretary's Silver Medal for Meritorious Service, the highest award given to an individual in each DHS component.

Kimberly Thigpen Tart, J.D.*

Kimberly Thigpen Tart is an analyst in the Office of Policy, Planning, and Evaluation at the National Institute of Environmental Health Sciences (NIEHS). Prior to this position, she served as news editor of Environmental Health Perspectives for 15 years. Her current focus areas include climate change and human health, global environmental health, prevention research, and research policy and translation. She represents NIEHS to the NIH Prevention Research Coordinating Committee and as liaison to the Institute of Medicine Roundtable on Environmental Health Sciences, Research and Medicine. She is a member of the U.S. Global Change Research Program Interagency Climate Change and Human Health Working Group and co-chair for communications and engagement. She co-chairs the Subcommittee on Climate Change and Children's Health of the President's Task Force on Children's Environmental Health Risks and Safety Risks to Children. She received her B.A. with Honors in journalism and her J.D. from the University of North Carolina at Chapel Hill, where she currently is pursuing a Masters in Public Health.

**indicates Subcommittee on Climate Change members*

Harriet Tregoning

Harriet Tregoning is the Director HUD's Office of Economic Resilience, where her Office will help cities, counties and towns across the country build a strong foundation for a diverse and prosperous economy based on enhancing community quality of place, economic opportunity, fiscal stability, transportation choice, and affordability. She was recently the Director of the District of Columbia Office of Planning, where she worked to make DC a walkable, bikeable, eminently livable, globally competitive and sustainable city. Prior to this she was the director of the Governors' Institute on Community Design and co-founder, with former Maryland Governor Glendening, and executive director of the Smart Growth Leadership Institute. She served Governor Glendening as both Secretary of Planning and then as the nation's first state-level Cabinet Secretary for Smart Growth.

Chris Trent, M.S.*

Chris Trent is a Health Scientist in the Office of Lead Hazard Control and Healthy Homes at the U.S. Department of Housing and Urban Development (HUD). In her current capacity, Chris works primarily on developing and implementing cross-cutting technical and policy-focused healthy homes programs that involve substantial interagency collaboration and coordination with other federal partners. Examples of recent initiatives of interest include development and implementation efforts for the interagency Advancing Healthy Housing: A Strategy for Action; coordinating radon policy initiatives between HUD program offices and the Federal Radon Action Plan Work Group; and, overseeing the development of a web-based Healthy Community Index and Assessment Tool. Chris has considerable background in occupational and environmental health and safety, with a M.S. in industrial hygiene from the University of North Carolina at Chapel Hill (UNC-CH). She is a Ph.D. candidate at UNC-CH with research focused on the health and economic burden from residential indoor air pollutants.

Juli Trtanj, M.S.

Juli Trtanj is responsible for developing and implementing the National Oceanic and Atmospheric Administration (NOAA) Health Strategy across NOAA and with other federal, state, local and international Agencies, academic and private sector partners. She is the NOAA Lead for the Memorandum of Understanding between NOAA and the Centers for Disease Control (CDC), and coordinates a burgeoning NOAA One Health Working Group and related Ecological Forecasting efforts on pathogens. Ms. Trtanj co-chairs the US Global Change Research Program, Climate Change and Human Health Group (CCHHG); the United States/European Union Task Force on Biotechnology, Marine Genomics Working Group; and the CDC- supported Environment and Public Health Tracking Network, Climate Change Content Working Group. She is the Water-Related Illness Component Lead for the Group on Earth Observations (GEO) and is directly involved with European, South African, Asian partners and the World Health Organization (WHO) in the development of the Early Warning Systems, specifically for cholera and other vibrios. Ms. Trtanj is also an active collaborator in the NSF-funded Research Collaboration Network on Marine Emerging Diseases and is on the American Meteorological Society Board on Health and the Environment. From 1996 to present she has developed and directed multidisciplinary and multi-partner programs on Oceans and Human Health, and Climate Variability and Human Health. She has contributed to, reviewed, or edited sections of several IPCC and US National Climate Assessment reports and authored several book chapters and journal articles. She earned her Master in Environmental Science from Yale School of Forestry and Environmental Studies in 1994, and her Bachelors in 1986 from the University of California Santa Barbara.

Isabel Walls, Ph.D.

Dr. Walls is the National Program Leader for Food Safety at USDA's National Institute of Food and Agriculture, where she provides scientific leadership to food safety activities. Within USDA, Dr. Walls has previously served as the Senior Advisor for Food Safety, Nutrition and Health to USDA's Chief Scientist, where she coordinated multi-agency activities in food safety and nutrition. She also served as a Senior Advisor at USDA's Foreign Agricultural Service, providing scientific advice to address international food safety and animal health policy issues, and as a Senior Scientist at the Food Safety and Inspection Service, where she provided scientific advice on both food safety and food defense issues.

Dr. Walls serves as an author for the Food Safety chapter of the National Climate Assessment Interagency Special Report on the Impacts of Climate Change on Human Health in the US. Additional professional activities include serving as the USDA representative to the White House National Science and Technology Council Interagency Working Group on Language and Communication, and serving as past Chair of the US Government Interagency Risk Assessment Consortium, a forum for enhanced communication and coordination among 19 federal agencies that develop and utilize food safety risk assessments.



Lewis Ziska, Ph.D., M.S.

Dr. Ziska is a Plant Physiologist with the USDA's Agricultural Research Service in Beltsville, Maryland. After graduating from the University of California, Davis, he began his career as a Smithsonian fellow, and then took up residence as the Project Leader for global climate change at the International Rice Research Institute in the Philippines before joining USDA. Since joining USDA, Dr. Ziska has published over 100 peer-reviewed research articles related to climate change and rising carbon dioxide that address: (1) Agriculture and Food Security; (2) Weeds and weed management; (3) Invasive species; (4) Plant biology and public health.

Dr. Ziska is a recent contributor to the 2014 International Panel on Climate Change report (Food Security Chapter) and the 2014 National Climate Assessment (Public Health Chapter). His work has appeared in Scientific American, USA Today, CBS Nightly News, National Geographic, The New York Times, and The Wall Street Journal. In 2010, Esquire magazine honored Dr. Ziska with their Best and Brightest award.

particular, any substantive revisions to OAC 3745–17–03, including any revisions to OAC 3745–17–03(B)(1), are not at issue in this rulemaking. Only comments regarding EPA's correction of the error in the October 26, 2010, action are germane to this rulemaking under section 110(k)(6).

EPA notes that it is neither staying nor revoking the correction action in the April 3, 2013, notice, because that could be misleading to regulated entities, regulators, and members of the public alike. Because the error in the October 26, 2010, action was in essence a typographical error, and because there was no actual approval of any revisions to OAC 3745–17–03 other than the revised cross reference in OAC 3745–17–03(A), the previously approved version of the remainder of OAC 3745–17–03 remains in effect in the Ohio SIP. Based upon the still pending proposed disapproval of certain substantive revisions to OAC 3745–17–03, EPA believes that parties such as regulated entities affected by those substantive revisions would be well aware of this fact, but not all other parties should be expected or presumed to have this degree of understanding or responsibility to be informed. While EPA is pursuing correcting action under authority of CAA section 110(k)(6), to supersede the correcting action under the Administrative Procedures Act, that EPA published on April 3, 2013, EPA anticipates that the codification as corrected pursuant to section 110(k)(6) will replicate the codification as corrected on April 3, 2013. Accordingly, EPA is not staying or revoking the correction in the April 3, 2013, action, in the interim during this rulemaking under section 110(k)(6). The April 3, 2013, action will become moot once EPA takes final action on today's proposal.

V. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. This action merely corrects an error in EPA's prior action and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);

- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);

- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);

- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);

- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);

- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Particulate matter, Reporting and recordkeeping requirements.

Dated: January 13, 2014.

Susan Hedman,

Regional Administrator, Region 5.

[FR Doc. 2014–01319 Filed 2–6–14; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR PART 82

[FRL–9906–16–OAR]

Request for Public Engagement in the Interagency Special Report on the Impacts of Climate Change on Human Health in the United States

AGENCY: U.S. Environmental Protection Agency (EPA) on behalf of the United States Global Change Research Program (USGCRP).

ACTION: Request for Public Submissions of Comments on a Draft Report Prospectus, Information, and Contributing Author Nominations, and Notice of a Public Forum.

SUMMARY: As part of the President's Climate Action Plan and ongoing efforts within the US Global Change Research Program (USGCRP), the Interagency Crosscutting Group on Climate Change and Human Health (CCHHG) and a subset of the Interagency National Climate Assessment Working Group (INCA) have initiated an interagency Special Report on the impacts of observed and projected climate change on human health in the United States. This data-driven technical synthesis and assessment will be an interagency product of the USGCRP organized by the CCHHG. This request for public engagement presents opportunities to submit comments on the Draft Report Prospectus, scientific information to inform the assessment, and nominations for contributing authors, and announces a Public Forum to Inform the Interagency Special Report on the Impacts of Climate Change on Human Health in the United States.

DATES: *Comments:* Comments on the draft prospectus, information to inform the Special Report, and contributing author nominations may be submitted during a 30-day period beginning March 1, 2014. All submissions should be received by USGCRP on or before 11:59 p.m. Eastern Time. March 31, 2014. The Public Forum will be held March 13, 2013 from 10 a.m.–5 p.m. Eastern Time.

Public Forum: The Public Forum, organized by the CCHHG, will be held on March 13, 2014.

ADDRESSES: The March 13, 2014 Public Forum will be held at the EPA William Jefferson Clinton East building, Room 1153, 1301 Constitution Avenue NW., Washington, DC 20460. To register, please follow the detailed instructions as provided below.

Information in response to the Request for Comments on the Draft

Prospectus, Call for Information, and Call for Contributing Author Nominations must be submitted electronically at: <http://globalchange.gov/component/content/article/990>.

FOR FURTHER INFORMATION CONTACT: For details on the period for submission of scientific information, comments on the Draft Prospectus, and call for contributing author nominations from the public, please contact Allison Crimmins; telephone: 202-343-9170; or email: healthreport@usgcrp.gov.

[Responses to this notice are not offers and cannot be accepted by the Government to form a binding contract or issue a grant. Information obtained as a result of this request may be used by the government. Please do not include any information that might be considered proprietary or confidential.]

SUPPLEMENTARY INFORMATION:

I. Request for Comment on Draft Report Prospectus

A. How to Submit Comments on the Draft Prospectus

The Draft Prospectus presented in Section I.B of this Notice describes proposed plans for scoping, drafting, reviewing, producing, and disseminating the Interagency Special Report on the Impacts of Climate Change on Human Health in the United States. EPA invites interested parties to review the Draft Prospectus and provide comments within the 30-day public comment period, beginning March 1, 2014 and ending 11:59 p.m. Eastern Time March 31, 2014. The EPA and the CCHHG are seeking comments on the Special Report objectives, proposed topics, and process as outlined in the Draft Prospectus. Public comments received on the Draft Prospectus will be evaluated and used to inform the Special Report Final Prospectus.

Comments on the Draft Prospectus can be made at: <http://globalchange.gov/component/content/article/990>.

B. Draft Prospectus for the Interagency Special Report on the Impacts of Climate Change on Human Health in the United States: An Assessment of Observed and Projected Climate Change Impacts on Human Health in the U.S.

(1) Overview

As part of the President's Climate Action Plan and ongoing efforts within the US Global Change Research Program (USGCRP), the Interagency Crosscutting Group on Climate Change and Human Health (CCHHG) and a subset of the Interagency National Climate Assessment Working Group (INCA)

have initiated an Interagency Special Report on the Impacts of Climate Change on Human Health in the United States. This data-driven technical synthesis and assessment will be an interagency product of the USGCRP, organized by the CCHHG.

The Special Report will be an evidence-based, quantitative assessment of observed and projected climate change impacts on human health in the United States. Development of the report will leverage existing activities of the CCHHG and INCA members, aggregate and assess current quantitative research on human health impacts of climate change, and summarize the current state of the science. As a technical scientific assessment, the Special Report will extend the work begun under the 2008 Synthesis and Assessment Product 4.6 (SAP 4.6) Analyses of the Effects of Global Change on Human Health and Welfare and Human Systems and the forthcoming third National Climate Assessment (NCA) by using modeling and analysis tools to quantify, where possible, projected national-scale impacts of climate change to human health. Such analyses will attempt to identify and bound impact uncertainties, as well as better define changes in attributable epidemiological risks, particularly for vulnerable populations, with the goal of informing public health authorities and other public planning and resource management entities.

The lead and coordinating Federal agencies for the Special Report are the Centers for Disease Control and Prevention (CDC), National Institute of Health (NIH), National Oceanic and Atmospheric Administration (NOAA), and Environmental Protection Agency (EPA).

(2) Proposed Focus Areas

The proposed scope of the Special Report will cover the following eight focus areas, which will each comprise a section of the Special Report:

- (a) Thermal Extremes: Heat and Cold Waves
- (b) Air Quality Impacts
- (c) Vectorborne and Zoonotic Disease
- (d) Waterborne and Foodborne Diseases
- (e) Food Safety
- (f) Extreme Weather and Climate Events
- (g) Mental Health and Stress-Related Disorders
- (h) Vulnerable Regions and Subpopulations to Health Impacts of Climate Change

The authors will review and assess the literature in each focus area in order to summarize the state of the science

regarding observed and projected health-related climate change impacts and associated changes in risk. Four sections of the Special Report propose to go beyond the assessment of literature to present additional modeling and/or quantitative analyses of the projected health impacts from climate change. Additional quantitative analyses conducted for the Special Report are proposed in the areas of:

- (1) Extreme Heat Mortality
- (2) Air Quality Impacts (Ozone or PM 2.5)
- (3) Lyme Disease
- (4) Vibrio-related Illness.

The sections below provide more detail on the scope of observations and projections that will be included in each section.

(a) Observed Climate Change Impacts on Human Health

Where possible, the Special Report will identify relationships between global, national, and regional climate changes and associated impacts on human health in the United States over the last century. Each section will include a "state of the science" overview aimed at understanding observed impacts and developing/maintaining climate-health indicators. Because the impacts of climate change on health are complex and often dependent on multiple confounding socioeconomic and environmental factors, the methodology for developing appropriate climate and health indicators is challenging and still emerging. The authors of each section will leverage current efforts across multiple agencies to begin to address methodological challenges and further develop climate and health indicators, including the NCA indicator work and ongoing efforts at the EPA, CDC (through the Environmental Public Health Tracking Network), NIH (in collaboration with World Health Organization), and others.

Though it is often difficult to attribute the exact impact of climate on many health indicators due to confounding factors (e.g., the ability of communities to prepare for and respond to the risks posed by climate change; the vulnerability of different populations and communities), such indicators will be instrumental not only in tracking and measuring health impacts of climate change, but also in identifying areas where public health intervention is most needed or likely to be most effective. A more comprehensive set of indicators will collectively demonstrate and communicate observed changes in climate change risk to Americans.

Where quantitative national indicators are not available, or where

health impacts are too secondary or indirect in nature to attribute to climate change, a qualitative examination of the state of the science will provide context for these additional health threats and may serve to identify areas for future research. Further investigation of the impacts of climate change on Americans' overall well-being and welfare, though important, is beyond the scope of this report.

(b) Projected Changes in Health Risks

While certain advances in the state of the science over the last five years are evident, research on projected changes in future health risk under different climate scenarios is in varying stages of development. As such, each section of the Special Report will seek to summarize the literature on modeling and quantification efforts regarding climate impacts on human health. The authors will pay special attention to research that frames risks in terms of probability-based changes in exposure, vulnerability, and adaptive capacity.

As stated previously, four sections will include additional quantitative analyses to evaluate a range of possible changes in future health-related climate impacts and risks: (1) Extreme Heat Mortality; (2) Air Quality Impacts (Ozone or PM_{2.5}); (3) Lyme Disease; and (4) Vibrio-related Illness. The authors will leverage existing or ongoing research or analytical efforts to derive additional quantitative analyses developed specifically for this report. This work will identify areas where probabilistic changes in attributable risks can be characterized, and where scientific uncertainty has been better defined since the publication of SAP 4.6. Each section will utilize established processes for determining and reporting confidence levels and likelihood of specific impacts across a range of scenarios and possible outcomes, and will articulate all standards or modeling assumptions. Existing products from other agency workgroups, such as the USGCRP's Metadata Access Tool for Climate and Health (MATCH) online database, will be incorporated as appropriate.

For certain health outcomes, research that characterizes human health risks in terms of probability-based changes in exposure or vulnerability may provide a way to contextualize health risks in terms relevant for public health officials and planners. For example, the relationship between projected temperature increases and certain waterborne pathogens (e.g., Vibrio bacteria) is well known, but the link between projected changes in exposure to these pathogens and the projected

increase in disease incidence remain uncertain. Thus, a probability-based metric of changes in vulnerability may be used to simply and clearly communicate changes in risk into the future and under alternative climate scenarios where a robust national projection in the annual number of cases of such diseases is not possible to derive at this time. Where appropriate, such risk-based framing will be highly valuable to informing efforts aimed at preventing or responding to climate impacts. In addition, this section may provide a framework for conveying complex changes in risk under uncertainty by mapping especially vulnerable populations or sites specifically related to environmental justice concerns.

(c) Other Report Scope Considerations

Geographical Scope: The focus of the Special Report is on impacts within the United States. The report may consider global linkages and implications where appropriate. For instance, global studies may be considered for certain impact areas where there is a lack of long-term, consistent historical monitoring, such as the health impacts of extreme weather events. In some instances, regional studies may be more appropriate in geographic areas where risk is not homogenous across the nation, such as the spread of Lyme Disease.

Timescales: While climate change is observed and measured on long-term (30+ years) time scales, decision frameworks for public health officials and regional planners are often based on much shorter time scales, determined by epidemiological, political, and/or budgeting factors. This Special Report will quantify the implications of overlaying impact trends that occur on typical climatological time frames (e.g., from changes in extreme weather events to end-of-century projections of impacts such as sea level rise) on data from epidemiological time frames (e.g., from immediate or episodic health threats to cumulative exposure or the appearance of developmental effects).

Uncertainty: Uncertainty will be characterized as qualitative confidence levels and, where possible, quantitative probabilistic likelihoods of specific impacts across a range of scenarios and possible outcomes. Measures of uncertainty expressed in the Special Report will be based on scientific evidence, statistical analysis of observations or model results, and expert judgment. The Special Report will follow NCA guidelines for transparent reporting of likelihood, confidence, and uncertainty findings.

Complex Linkages and Potentially Confounding Factors: Many factors will affect the impact of climate change on human health; not all of these factors will be addressed in the Special Report. For example, a population's vulnerability (1) may be affected by direct climate changes or by non-climate factors (e.g., changes in population dynamics, economic development, education, infrastructure, behavior, technology, and ecosystems); (2) may differ across regions and in urban, rural, and coastal communities; and (3) may be influenced by individual vulnerability factors such as age, socioeconomic status, and existing physical and/or mental illness or disability. In addition, climate change or other non-climate factors will cause changes in adaptive capacity, ranging from an individual's ability to acclimatize to different meteorological conditions to a community's ability to prepare for and recover from damage, injuries, and lives lost due to extreme weather events. Attribution and detection considerations will be discussed in the introductory section(s) of the Special Report. However, projections of many of the factors listed above, and many other compounding, secondary, or indirect climate effects, though important to consider as part of a comprehensive assessment of changes in risks, may be beyond the scope of this report.

Research Needs: While the goal of the Special Report is to highlight the current state of the science regarding climate impacts on health, research needs identified through the development of this assessment will be briefly summarized in the concluding section(s), as they may serve to inform ongoing gap analyses being conducted outside the scope of this Special Report.

(3) Process

(a) Audience, and Communicating Health Risks Associated With Climate Change

The Special Report will be designed to inform public health officials, urban planners, decision makers, and other stakeholders at multiple levels of government who are interested in better understanding the risks climate change presents to human health. The goal of this Special Report is to provide these groups with updated information on the observed and projected impacts of climate change on human health and changes in risk to health. Though the report will not include policy recommendations, this information may help inform adaptation decisions and other strategies in the public health

arena. Better definitions of health risk and uncertainty will improve hazard identification and allow for better-coordinated responses to the impacts of climate change on human health. To that end, the Special Report will also highlight ongoing research focused on quantifying the risks to health associated with climate change.

(b) Lead Authors, Contributing Authors, and Required Expertise

Authors will be selected based on their demonstrated subject matter expertise, their relevant publications and knowledge of specific topics designated in the draft outline, their demonstrated writing abilities and accomplishments, and their availability, such that they can aid in the development of a robust scientific, technical assessment. As a federal interagency report, the selection of lead authors will be limited to Federal employees and their contractors. Lead Authors may include a selection of CCHHG members, attendees of an initial scoping workshop, and other federal colleagues and contractors with relevant expertise. There is potential for additional cooperation with existing efforts, including the NCA indicators team, NIH literature review workgroup, and other agency collaborations.

Contributing Authors with relevant subject matter expertise may be nominated by lead authors, CCHHG or other interagency members, and the general public (through this public **Federal Register** notice calling for contributing author nominations). Contributing Authors may be federal employees or non-federal subject experts. If needed to fill gaps in expertise, Contributing Authors will be selected through an independent process led by an EPA contractor based on expertise (e.g., scholarly publications, etc.) and other criteria.

Collectively, the Lead and Contributing Authors will be responsible for preparing the initial draft of the report, including the text and any analysis required to synthesize the underlying studies on which the Special Report is based. Authors will rely on existing peer-reviewed literature as a basis for the report. Lead Authors will decide how best to organize their respective teams, including division of responsibility and time requirements among the Contributing and Lead Authors. In addition, Lead Authors and Contributing Authors will be responsible for reviewing relevant literature submissions made through this **Federal Register** Notice call for information to inform the Special Report, and for responding to public

comments on the Draft Special Report. All authors should be accomplished writers and have demonstrated technical backgrounds in at least one field relevant to the implications of climate change on human health in the United States.

(c) Agency Roles

The CCHHG will be responsible for compiling and synthesizing contributions from all authors. From within the CCHHG, a steering committee for the Special Report has been established to provide guidance and coordination to staff/authors. Lead agencies (EPA, NOAA, CDC, NIH) will provide staff support including, where appropriate, contractor support. EPA will serve a coordinating function to include providing support and facilitation of two planning workshops to bring together CCHHG members, federal agency experts, and supporting contractors, as appropriate. The workshops will serve to facilitate the scoping and development of report outlines and drafts, and to identify any model analyses or data retrieval needed for the assessment. EPA will work closely with the CCHHG Steering Committee to provide others (e.g., USGCRP) with regular progress updates.

(d) Information Quality and Peer Review

The Special Report will be a federal interagency USGCRP product. As such, the process for preparation will be consistent with the guidelines for preparing USGCRP products, with referenced materials derived primarily from the existing peer-reviewed scientific literature and consistent with USGCRP guidance regarding use of grey literature. The report will follow federal information quality, transparency, and accessibility guidelines, and will undergo peer review, public review, and final interagency review.

(e) Process for Public Engagement and Publication

The CCHHG Steering Committee plans to provide a number of opportunities for public engagement in scoping, informing, and reviewing the Special Report. During the initial scoping phase, the following opportunities will be available as described in this **Federal Register** Notice:

(i) Notice of Request for Comments on Draft Report Prospectus: A 30-day call for comments on the Special Report objectives, proposed topics, and process as outlined in the Draft Prospectus.

(ii) Call for Information: A 30-day call for submissions of recent, relevant, scientific and/or technical research

studies on observed and/or projected climate change impacts on human health in the United States that have been peer-reviewed and published or accepted for publication.

(iii) Nominations for Contributing Authors: A 30-day call for nominations of Contributing Authors to assist chapter author teams in the development of the Special Report chapters or sections. Interested parties are invited to submit nominations of subject matter experts, with descriptions of relevant expertise and publications

(iv) Notice of Public Forum to Inform the Interagency Special Report on the Impacts of Climate Change on Human Health in the United States: A free and open public forum to be convened March 13, 2014 at a federal facility in Washington, DC to facilitate engagement with stakeholders, non-federal subject matter experts, and interested public. After completion of a Public Review Draft of the Special Report, EPA on behalf of the USGCRP will issue a second **Federal Register** Notice to announce a 45-day public comment period for the draft report. The public will be able to view the Draft Special Report and submit comments to an online docket available on the USGCRP's Web site. The CCHHG Steering Committee will also work to schedule side events, presentations at relevant conferences, and webinars to further engage the community of experts and the general public. Public comments received on the Draft Special Report will be evaluated and used to inform the final report.

The CCHHG and USGCRP will publish the final Special Report electronically and consider options for hard copy publication. They will also explore options for online integration with future phases of the USGCRP's Global Change Information System. A full communications plan will be developed by the lead and supporting agencies along with designated authors, with input and assistance from the USGCRP communications team.

(f) Proposed Timing

The Special Report is an interim report, designed to be released after the third and before the fourth National Climate Assessments. A draft of the Special Report is expected to be made available for public comment early in 2015, with final publication expected in late 2015.

II. Call for Relevant Scientific Information To Inform the Special Report

Interested parties are invited to assist the EPA and USGCRP in collecting and

refining the scientific information base for the assessment. To do so, parties are asked to submit recent, relevant, scientific and/or technical research studies on observed and/or projected climate change impacts on human health in the United States that have been peer-reviewed and/or published or accepted for publication in the peer reviewed literature.

All scientific literature submitted in response to this call for information must be received within the 30-day call for information period, beginning March 1, 2014 and ending 11:59 p.m. Eastern Time on March 31, 2014. Submissions must be uploaded electronically at: <http://globalchange.gov/component/content/article/990>.

III. Call for Contributing Authors Nominations

EPA and the CCHHG are also calling for nominations for Contributing Authors to assist specific chapter author teams in the development of the Special Report chapters or sections. Interested parties are invited to submit nominations of subject matter experts, with descriptions of relevant expertise and publications. Contributing authors will assist in the preparation of specific sections of the report, working closely with chapter author leads and teams. Submissions must demonstrate that nominees are accomplished English-speaking writers with demonstrated technical backgrounds, such that they can aid in the development of a robust scientific, technical assessment as subject matter experts in one or more of the following areas of climate-related health impacts:

- (a) Thermal Extremes: Heat and Cold Waves
 - (b) Air Quality Impacts
 - (c) Vectorborne and Zoonotic Disease
 - (d) Waterborne and Foodborne Diseases
 - (e) Food Safety
 - (f) Extreme Weather and Climate Events
 - (g) Mental Health and Stress-Related Disorders related to Climate Change
 - (h) Vulnerable Regions and Subpopulations to Health Impacts of Climate Change
- Responses to this request must be made within the 30-day call for Contributing Author nominations period, beginning March 1, 2014 and ending 11:59 p.m. Eastern Time on March 31, 2014. A completed nomination form, including a curriculum vitae or resume for each nominee that demonstrates the nominee's relevant area of expertise, must be submitted electronically at: <http://globalchange.gov/component/content/article/990>. The curriculum vitae or resume must be in English and preferably no more than 5 pages, identifying topical expertise and relevant publications. The nomination form will also ask for a brief statement of primary expertise (e.g., projected climate impacts on air quality, climate-related vectorborne diseases, waterborne diseases in the U.S.). Please also ensure that curriculum vitae or resume include address, phone number, email address, education, and the following information, if applicable: professional association membership, committee involvement, involvement in the development of other scientific assessments, scientific publications in

this field, and relevant leadership activities.

IV. How To Register for the Public Forum To Inform the Interagency Special Report on the Impacts of Climate Change on Human Health in the United States

The Public Forum will be held on March 13, 2014, at the EPA William Jefferson Clinton East building, Room 1153, 1301 Constitution Avenue NW., Washington, DC 20460. It is open and free to the public, but with limited space available. The first 120 people to register may attend. Registration will be available beginning February 13, 2014. Please register by going to <http://globalchange.gov/component/content/article/990>. Because this Public Forum is being held at a U.S. government facility, individuals planning to attend the hearing should be prepared to show valid picture identification to the security staff in order to gain access to the meeting room. The forum is an opportunity for public engagement, but since the event will not be formally recorded, it does not replace the Call for Information request in Section II or the Call for Contributing Author Nominations in Section III of this Notice; all submissions of relevant scientific information and Contributing Author nominees must be made to the USGCRP Web site as described above.

Dated: January 28, 2014.

Sarah Dunham,

Director, Office of Atmospheric Programs.

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