

January 2020

CURRICULUM VITAE

JONATHAN ALAN PATZ, MD, MPH

PERSONAL DATA

John P Holton Chair of Health and the Environment
 Director, Global Health Institute
 Professor, Nelson Institute for Environmental Studies and Department of Population Health Sciences
 University of Wisconsin–Madison
 1700 University Ave.
 Madison, WI 53726

Phone (608) 263-2188
 Email patz@wisc.edu
 Web www.globalhealth.wisc.edu
 Web www.sage.wisc.edu (web)
 Twitter @jonathanpatz

EDUCATION AND TRAINING

B.A./1980 Colorado College / Biology

M.D./1987 Case Western Reserve University, School of Medicine

Postdoctoral Training

1987-'90 **Family Medicine Residency**
 Medical University of South Carolina, Charleston, South Carolina

MPH/1992 **Masters of Public Health Program**
 Johns Hopkins School of Hygiene and Public Health, Baltimore, Maryland.

1993-'94 **Occupational and Environmental Medicine Residency**
 Johns Hopkins School of Hygiene and Public Health, Baltimore, Maryland

Medical Licensure

Maryland (active) -D42440, Montana (inactive)

Medical Boards

1990 **American Board of Family Practice Certification (Recertified 1996)**
 1997 **American Board of Occupational and Environmental Medicine**

PROFESSIONAL EXPERIENCE

2015-Current **John P. Holton Chair of Health and the Environment**

2011-Current **Director**, Global Health Institute, University of Wisconsin-Madison

2008-Current **Professor**, Nelson Institute for Environmental Studies & Department of Population Health Sciences, University of Wisconsin-Madison; **Faculty Affiliate** of the La Follette School of Public Affairs

2004-2008 **Associate Professor**, Nelson Institute for Environmental Studies; and Department of Population Health Sciences, University of Wisconsin-Madison

2004-2008 **Adjunct Associate Professor**, Department of Environmental Health Sciences, Johns Hopkins Bloomberg School of Public Health

2004-2010 **Affiliate Scientist**, National Center for Atmospheric Research (NCAR)

1999-2004 **Assistant Professor**, Department of Environmental Health Sciences, Johns Hopkins

Bloomberg School of Public Health

Joint Appointments: Departments of: 1) Molecular Microbiology & Immunology; 2) Epidemiology; 3) International Health; 4) Medicine (School of Medicine); 5) Earth and Planetary Sciences (School of Arts and Sciences)

- 1997-1999 **Assistant Scientist**, Department of Environmental Health Sciences, Johns Hopkins Bloomberg School of Public Health
- 1996-2004 **Founding Director**, Program on Health Effects of Global Environmental Change, Johns Hopkins Bloomberg School of Public Health
- 1994-1996 **Research Associate**, Department of Molecular Microbiology & Immunology, Johns Hopkins Bloomberg School of Public Health
- 1990-1994 **Clinician**, Family Practice
Missoula, Montana and Baltimore, Maryland
Practiced clinical family medicine.
- 1981-1983 **Research Assistant**, Children's Hospital, Boston, MA.
Researched early biomarkers for breast malignancies in cancer strain mice.
- 1979-1980 **Wildlife Biologist**, Colorado Division of Wildlife and Peregrine Falcon Fund.
Analyzed prey species DDT content and traced geographic pathway of this pesticide.

PROFESSIONAL ACTIVITIES

Society Membership and Leadership

National Academy of Medicine (elected member) as of October 21, 2019

Executive Board Member (elected), Consortium of Universities for Global Health 2018-current

Advisory Board Member, Medical Society Consortium on Climate Change, 2017-current

Council Member, American Geophysical Union (AGU), 2013-2015

Executive Committee Member, Tyler Prize for Environmental Achievement, 2011-current

President, International Association for Ecology and Health, 2006-2010

Executive Council Member, International Society for Environmental Epidemiology, 2009-2012

Executive Board Member, Consortium for Conservation Medicine, 2003-2004, and 2006-2012

Executive Board Member, Physicians for Social Responsibility (PSR), 2008-2015

Co-chair, Society of Occupational and Environmental Health, Conference on Climate Change: Implications for Occupational and Environmental Health, Bethesda, March 1997

Co-chair, American Academy of Microbiology, Special Colloquium on Climate Variability and Infectious Disease, June 1997

Section Council Member, American Public Health Association, Environment Section, 1997

Chairman, American Public Health Association Resolutions & Policy Development Committee, Environment Section, 1996

Associate, Project on Global Environmental Change and Health, Physicians for Social Responsibility, 1995-1998

Chairman, Environmental Health Subcommittee, American Academy of Family Physicians (Maryland Chapter), 1993-94

Advisory Panels

National Academy of Medicine

Committee Member, Grand Challenge on Human Health and Climate Change, 2020-current

Steering Committee Member, Action Collaborative on Decarbonizing the Health Sector, 2021-current

National Academy of Sciences

Committee Member, Accelerating Decarbonization in the United States: Technology, Policy, and Societal Dimensions, 2021 - current

Presidential Council of Advisors on Science and Technology (PCAST), Executive Office of the President

Working Group Member on Biodiversity Preservation and Ecosystem Sustainability, 2010

Additional Memberships:

American Association for the Advancement of Science, 2002-2008

American College of Occupational and Environmental Medicine, 1994-current

American College of Preventive Medicine, 1994-current

American Society of Tropical Medicine and Hygiene, 1998-2003

Faculty of 1000, 2002

Robert Wood Johnson, Transdisciplinary Studies in Health and Society, 2004-current

Review Panels

The Alexander von Humboldt Professorship, invited to selection committee, 2021
(this is the highest valued research award in Germany (between €3.5 and €5 million))

NIH: Infectious, Reproductive, Asthma and Pulmonary Conditions, Scientific Review Group, 2009-2015

NIH: Distinguished Stage 2 Editor for the Directors Opportunity, Five Themes in Population Sciences and Epidemiology study section, June 2010

CDC, National Center for Environmental Health: American Recovery and Reinvestment Act, Stimulus Grants, 2009

National Research Council, National Academy of Sciences

Committee Member, IOM Forum on Microbial Threats workshop on the “Potential Impacts of Global Environmental Change on Infectious Disease Emergence,” 2013-current

Committee Member, Indicators for Global Climate Change: Human Health Panel, 2009-2011

Committee Member, on Strategies and Methods for Climate-Related Decision Support, 2007-2009

Committee Member, on Applied NASA Research, 2006-2007

Committee Member, on Earth Science and Medicine, 2004-2007

Centers for Disease Control and Prevention

Member, Board of Scientific Counselors, CDC, National Center for Environmental Health/ATSDR, 2006-2010

Environmental Protection Agency

Advisory Committee Member, EPA, Office of Children’s Health, 2007-2013

Member, FACA panel to review the U.S. Climate Change Science Program's Synthesis and Assessment Product 4.6: “Analyses of the Effects of Global Change on Human Health, Welfare, and Human Systems,” September 2007

Board of Scientific Counselors, Subcommittee on Global Change, 2004

United Nations

Convening Lead Author, for the Millennium Ecosystem Assessment, 2002-2005

Task Force Member, United Nations, Task Force on Environmental Sustainability, for the UN Millennium Development Goals, 2002-2005

Principal Lead Author, United Nations Intergovernmental Panel on Climate Change (IPCC), 1994-2007 on the following reports:

Fourth Assessment Report on Climate Change (September 2004-2007)

Third Assessment Report on Climate Change 2001: Impacts, Adaptations and Vulnerability

Special Report on Technology Transfer, 1999

The Regional Impacts of Climate Change, 1997

Second Assessment Report, Climate Change Assessment – 1995. Impacts, Adaptations and Mitigation of Climate Change: Scientific Technical Analysis

US Global Change Research Program

Member, Multi-agency FACA Committee, Unified Synthesis Product: Global Climate Change Impacts in the United States, 2008-2009

Co-Chair, Health Expert Panel, US National Assessment: The Potential Consequences of Climate Variability and Change, 1998-2002

National Center for Atmospheric Research (NCAR)

Co-Chair, Summer Institute on Climate and Health, July 2004

Wisconsin-Based Advisory Committees

Steering Committee Member, Wisconsin Department of Health and Family Services, Environmental Health Tracking Program, 2005-current

Co-Chair for Health Task Force and Member of the Scientific Council, Wisconsin Initiative on Climate Change Impacts (WICCI), a collaborative venture between the state DNR and the Nelson Institute, 2007-current

Other Panels

Science Advisory Board Member, Colorado State University, School of Global Environmental Sustainability, 2014-current

Chair of the Science Advisory Board, Environmental Law and Policy Center, Chicago, 2020-current

Board Member of the Science Advisory, Environmental Law and Policy Center, Chicago, 2010-2020

Committee Member, Special Committee on Climate Change Health, National Association of City and County Health Officials (NACCHO), 2007-2011

External Expert, International Food Policy Research Institute; panel meeting September 16, 2003

External Expert, EPA, "Draft Report on the Environment: Technical Document;" panel meeting, May 10, 2002

Other Committees

Advisory Committee, NASA Socioeconomic Data and Applications Center, Columbia Earth Institute, Columbia University, 2009-2012

The Groundwater Foundation, Report entitled, "Protecting Our Water: A Primer for Preventing Pathogenic Contamination of Drinking Water Sources," 2007

International Scientific Advisory Board, University of Heidelberg, Department of Tropical Medicine, 2005-2015

International Council of Scientific Unions (ICSU), Global Environmental Change and Health Programme, February 2003-2005

Advisory Council, Consortium for Atlantic Regional Assessment, 2003-2005

World Health Organization, United Nations, Environment Programme, and Health Canada, Guidelines to Assess the Health Impacts of Climate Change, 2001-2004

Center for a Livable Future, JHU School of Public Health, 2000-2004

Citizens Jury on Global Climate Change, 2002

Health of the Oceans Module of the International Oceanic Commission, Global Oceans Observing System, 1998

Interagency US Country Studies Program, 1995-1997

Steering Committee Member

National Conference on Science, Policy and the Environment: *Environment and Security*, 2011-2012

National Association of County Health Officials (NACCHO), Special Committee on Climate Change Health, 2007-2009

Wisconsin Department of Health and Family Services, Environmental Health Tracking Program, 2005-current

UW-Madison, Masters of Public Health (MPH) Program, 2004-2014

UW-Madison, Global Health Center, 2004-2011 (then Director, Global Health Institute, 2011-current)

UW-Madison, Department of Population Health Sciences, PhD/MS Academic Program

National Council for Science and the Environment, Annual Conference, February 2007

EcoHealth ONE, Inaugural Conference of the International Association for Ecology and Health, October 2006

Chapman Conference on Ecosystem Interactions with Land Use Change, American Geophysical Union, Santa Fe, June 2003

International Development Research Centre International (Canada), for the Conference on Ecosystem Approaches to Human Health, Montreal, May 2003

Annual Conference of the International Society for Ecosystem Health, Washington, June 2002

American Academy of Microbiology, Climate & Infectious Disease (Second Colloquium) 1999-2000

National Academy of Science and Institute of Medicine, Conference on Health and Climate Change, Washington, DC, 1995

Program or Project Development

Developed web-based curriculum for middle school education entitled, "EcoHealth," released online May 2004 (<http://ecohealth101.org>)

Initiated and led Special Colloquium on Land Use Change and Health, Held in Washington, June 2002

Founded the Program on Health Effects of Global Environmental Change at JHBSPH, 1996

Co-developed and taught first JHU course on Global Change and Human Health, piloted Spring semester 1997. The course brings together faculty from Schools of Public Health, Engineering, and Arts and Sciences

Authored first resolution on Health and Climate Change that was passed by the American Public Health Association, 1995

Consultations

Presidential Advisory Committee, Rensselaer Polytechnical Institute (in establishing Environmental Health Center), November 20-21, 2005

National Center for Atmospheric Research (NCAR), July 2003-current

Lawrence Berkeley National Laboratory and the California Energy Commission, 2003

Science Advisor, film documentary series, *Journey to Planet Earth*, by Screenscope, 2000-current
Eastern Research Group, Climate effects on injuries and on crime (2001)

Stratus Consulting, Boulder, CO

- To review a report on heat-related mortality (October 2003)
- To co-author document to the United Nations Framework Convention on Climate Change (UNFCCC), 1999

World Health Organization

- WHO Special Report on Health for the International Conventions on Climate, Biodiversity, and Desertification, 2003-current
- WHO Workshop on Climate Change and Health in Small Island Nations, 1999-2002
- Consultant to WHO European Centre for Environment and Health, May 1998
- Consultant to WHO/UNEP/MRC Interagency Climate Change and Human Health Monitoring Workshop, December 1997
- WHO/WMO/UNEP Task Force member and Principal Lead Author preparing the monograph, *Climate Change and Human Health*, 1993-1996

Innovative Medical Research, Inc., Clinician for Lyme Disease vaccine clinical trials, 1996

EDITORIAL ACTIVITIES

Peer Review Activities

Manuscripts reviewed for:

Nature

Science

Lancet

Bioscience

Proceedings of the National Academy of Science (PNAS)

Journal of the American Medical Association (JAMA)

The New England Journal of Medicine (NEJM)

Proceedings of the Royal Society B (Biological Sciences)

American Journal of Public Health

American Journal of Epidemiology

British Medical Journal

Medical Journal of Australia

Environmental Health Perspectives

Emerging Infectious Diseases

Vector-borne and Zoonotic Diseases

Environmental Research

International Journal of Occupational and Environmental Health

International Journal of Hygiene and Environmental Health (Germany)

Climatic Change

Climate Research

Ecological Economics

Journal of Applied Ecology

Journal of Human and Ecological Risk Assessment

Journal of Travel Medicine

Bulletin of the World Health Organization

American Journal of Industrial Medicine

International Journal of Environmental Health Research

Frontiers in Ecology and the Environment

Annual Reviews of Energy & Environment

Clinical Reviews in Microbiology
Public Health Reports
The Science of the Total Environment (Canada)
Environmental Hazards
Public Library of Science (PLOS)–Biology
Air Quality, Atmosphere and Health
Mitigation and Adaptation of Strategies for Global Change

Invited Book Review for the *New England Journal of Medicine*, “Sustaining Life: Linkages Between Biodiversity and Human Health”

Invited Book Review for the *Journal of Climatic Change*, “Environmental Change, Climate and Health: Issues and Research Methods”

Invited Book Review for the journal *Lancet* on, “Life Support: Environment and Human Health”

Invited Reviewer for UNEP’s *Global Environmental Outlook* series of reports

Editorial Board Membership

Editorial Board Member:

Lancet, Planetary Health, 2017-current
Pan Amazonian Journal of Health, 2009-2012
Environmental Health Perspectives, 2007-current
Frontiers in Ecology and the Environment 2007-current
Ecohealth: Ecology and Health, 2003-2010

Guest Editor:

J Urban Health, 2019-2020, Invited Guest Editor, Special Issue on Planetary Health
PLOS Medicine, 2017-2018, Invited Guest Editor, Special Issue on Climate Change

Co-editor, *Encyclopedia of Environmental Health*, Elsevier Ltd., 2006-2010

Co-editor-in-chief, *Global Change and Human Health: Reviews on Globalisation, Environmental Change and Health*, 2000-2002

Advisory Board and Editorial Board, *Ecosystem Health* 1998-2002

Ad Hoc Review

Rockefeller Foundation and Lancet Commissioned report on Planetary Health, NYC, December 14, 2014

Rockefeller Foundation and Lancet Commissioned report on Climate Change, Submitted review, 2014

Netherlands Organization for Scientific Research, 2009

Reviewer, NASA Applied Sciences Program, Decision Support through Earth Science Research Results, 2007

Reviewer, NOAA Oceans and Health, Distinguished Scholars Program, October 2005

Reviewer, Institute of Medicine (IOM) report, Microbial Threats to Health: Factors in Emergence, January 2003

Review Panel Member, EPA Office of Research and Development, Global Change Research Program’s Research Strategy Plan, 2001

Reviewer, National Research Council (NRC) report on Oceans and Health, 1998

Reviewer of grant proposals for:

National Institute of Environmental Health Sciences (NIEHS)
 National Institute for Allergy and Infectious Disease (NIAID)
 National Science Foundation
 NASA
 The World Bank/Global Environment Fund
 Health Canada
 Dutch National Institute of Public Health and Environmental Protection
 National Oceanic and Atmospheric Administration
 US Navy
 Mathematics of Information Technology and Complex Systems Inc., Canada

HONORS AND AWARDS

2020	Chanchlani Global Health Research Award, McMaster University, Canada
2019	Elected member of the National Academy of Medicine
2017	Special Recognition Award, Medical Alumni Board of the Case Western University, School of Medicine
2017	Rotary International, Paul Harris Fellow Award
2015	Homer Calver Award for Leadership in Environmental Health, American Public Health Association
2014	Fulbright Scholar Award
2012	Bioneers Award, Dane County, Wisconsin
2009	H.I. Romnes Faculty Fellowship Award of the University of Wisconsin
2007	Nobel Peace Prize (awarded to UN IPCC Lead Authors and Co-chairs, along with Al Gore)
2006	Zayed International Prize for the Environment (awarded to Lead Authors and Co-chairs of the Millennium Ecosystem Assessment)
2005	Aldo Leopold Leadership Fellow
2005-2007	Senior Fellow of the UW Program for World Affairs and the Global Economy
1989	Family Medicine Teaching Award

PUBLICATIONS

(*Indicates lead author was a trainee under my direct supervision while completing the referenced work.)

Manuscripts in Review

Kruse, S*, Ezenwanne O, Otto M, Kjellstrom T, Remington PL, Lemke B, Simane B, **Patz JA**. Occupational Health Impacts of Climate Change in Sub-Saharan East Africa. *African J Environ Science and Technology* (submitted January 2, 2021).

Mailloux NA*, Abel DW, **Patz JA**. Cross-state PM_{2.5}-related Air Quality Health Benefits and Global Climate-related Social Benefits of 100% Clean Energy in the United States, *Environmental Health Perspectives* (submitted December 15, 2020).

Smith MR, Stull VJ, **Patz JA**, Myer SS. Nutritional and Health Benefits of Increasing Insect Consumption in Africa and Asia. *Environmental Research Letters* (submitted November 25, 2020).

Lee D, Ahmadul H, **Patz JA**, Block P. Predicting Social and Health Vulnerability to Floods in Bangladesh. *Natural Hazards and Earth System Sciences* (submitted November 25, 2020).

Hou X, Chen K, Li Q, Kang Y, Rao J, Ellenberg J, **Patz JA**, Gao S. Intra-county Modeling of COVID-19 Infection with Human Mobility: Assessing Spatial Heterogeneity with Business Traffic, Age and Race. *Proceeding of the National Acad Sciences PNAS* (submitted September 2020).

Younkin S, Fremont H, **Patz JA**. Transportation and Health Modeling for the US: Open Source Methods for Scientific Reproducibility. *J Transportation and Health* (submitted August 2020).

Peer Reviewed Journal Articles

Plowright RK, Reaser JK, Locke H, Stephen J, Woodley SJ, **Patz JA**, Becker DJ, Oppler G, Hudson P, Tabor GM. A Call to Action: Understanding Land Use-induced Zoonotic Spillover to Protect Environmental, Animal, and Human Health. *Lancet Planetary Health* (in press).

Reaser JK, Tabor GM, Becker DJ, Muruthi P, Witt A, Woodley SJ, Ruiz-Aravena M, **Patz JA**, Hickey V, Hudson PJ, Locke H, Plowright RK. Land Use-induced Spillover: Priority Actions for Protected and Conserved Area Managers. *PARKS* (in press).

Tefera W, Kumie A, Berhane K, Gilliland F, Lai A, Sricharoenvech, P, Samet J, **Patz JA**, Schauer JJ. Chemical Characterization and Seasonality of Ambient Particles (PM_{2.5}) in the City Centre of Addis Ababa (2020). *Int J Environ Res Public Health*, Sep 24; 17(19):6998. doi: [10.3390/ijerph17196998](https://doi.org/10.3390/ijerph17196998)

Limaye VS, Grabow ML, Stull VJ, **Patz JA**. Developing a Definition of Climate and Health Literacy. *Health Affairs*, 12 (2020): 2182–2188, doi: 10.1377/hlthaff.2020.01116.

Gao S, Rao J, Kang Y, Liang Y, Kruse J, Dopfer D, Sethi AK, Reyes JFM, Yandell BS, **Patz JA** (2020). Association of Mobile Phone Location Data Indications of Travel and Stay-at-Home Mandates With COVID-19 Infection Rates in the US. *JAMA*;3(9):e2020485. doi: 10.1001/jamanetworkopen.2020.20485.

Patz JA, Stull VJ, Limaye VS. A Low-Carbon Future Could Improve Global Health and Achieve Economic Benefits. *JAMA*, 2020;323(13):1247–1248. doi:10.1001/jama.2020.1313.

Uelmen J*, Brokopp C, **Patz JA**. A 15-year Evaluation of West Nile Virus in Wisconsin: Effects on Wildlife and Human Health. 2020. *Int. J. Environ. Res. Public Health*, 17(5), 1776, <https://doi.org/10.3390/ijerph17051767>

Anenberg SC, Bindl M, Brauer M, Castillo JJ, Cavalieri S, Duncan BN, Fiore AM, Fuller R, Goldberg DL, Henze DK, Hess J, Holloway T, James P, Jin X, Kheirbek I, Kinney PL, Liu Y, Mohegh A, **Patz JA**, Jimenez MP, Roy A, Tong D, Walker K, Watts N, West JJ. Using Satellites to Track Indicators of Global Air Pollution and Climate Change Impacts: Lessons Learned from a NASA-supported Science-Stakeholder Collaborative. *Geohealth* June 2020, <https://doi.org/10.1029/2020GH000270>.

Grabow ML, Bernardinello M, Bersch AJ, Engelman CD, Donate AM, **Patz JA**, Peppard PE, Malecki MC. (2019). What Moves Us: Subjective and Objective Predictors of Active Transportation. *J Transport & Health*; 15, <https://doi.org/10.1016/j.jth.2019.100625>.

Stull VJ* and **Patz JA**. Research and Policy Priorities for Edible Insects (2019). *Sustainability Science*, <https://doi.org/10.1007/s11625-019-00709-5>.

Stull VJ*, Kersten M, Bergmans RS, **Patz JA**, Paskewitz S. Crude Protein, Amino Acid, and Iron Content of *Tenebrio molitor* Reared on an Agricultural Byproduct from Maize Production: An Exploratory Study, *Annals of the Entomological Society of America*, Volume 112, Issue 6, November 2019, Pages 533-543, <https://doi.org/10.1093/aesa/saz024>.

Sippy R*, Herrera D, Gaus D, Gangnon R, Osorio J, and **Patz JA**. Seasonality of Dengue Fever in Rural Ecuador: 2009-2016. *PLOS NTDs*, Dec, 2018. doi: <https://doi.org/10.1101/452318>.

Mora C. et al. Broad Threat to Humanity from Cumulative Climate Hazards Intensified by Greenhouse Gas Emissions. *Nature Climate Change* 8 (12): 1062.

Limaye VS*, Vargo J, Harkey M, Holloway T, **Patz JA**. Climate Change and Heat-Related Excess Mortality in the Eastern USA. *EcoHealth*, August, 2018, <https://doi.org/10.1007/s10393-018-1363-0>.

Stull VJ*, Finer E, Bergmans R, Febvre H, **Patz JA**, Weir TL. Impact of Edible Cricket Consumption on Gut Microbiota in Healthy Adults, a Double-blind, Randomized Crossover Trial. *Scientific Reports* 2018 Jul 17;8(1):10762. [10.1038/s41598-018-29032-2](https://doi.org/10.1038/s41598-018-29032-2).

Patz JA and West JJ. The Paris Agreement Could Save Lives in China. *Lancet Planetary Health* 2018; April;2(4):147-148. DOI: [10.1016/S2542-5196\(18\)30052-4](https://doi.org/10.1016/S2542-5196(18)30052-4).

Abel DW*, Holloway T, Harkey M, Meier P, Ahl D, Limaye VS, **Patz JA**. Air Quality-Related Health Impacts from Climate Change and from Adaptation of Cooling Demand for Buildings in the Eastern United States: An Interdisciplinary Modeling Study. *PLOS Med* 2018,15(7): e1002599. <https://doi.org/10.1371/journal.pmed.1002599>. [34 citations, 12-12-2020]

Vargo J*, Younkin S, **Patz JA**. A New Implementation of the Integrated Transport and Health Impacts Model for the United States. *Journal of Transport and Health*. <https://doi.org/10.1016/j.jth.2017.05.222>.

Meier P, Holloway T, **Patz JA**, Harkey M, Ahl D, Scott Schuetter S, Hackel S. Impact of Warmer Weather on Emissions Due to Building Energy Use. *Environmental Research Letters*; 2017; 12: 064014.

Abel D*, Holloway T, Kladar RM, Meier P, Ahl D, Harkey M, Schuetter S, **Patz JA**. Response of Power Plant Emissions to Ambient Temperature in the Eastern United States. *Environ Sci and Technol*. 2017, 51,10, 5838-46.

Patz JA. Solving the Global Climate Crisis: The Greatest Health Opportunity of our Times? ^[1]_{SEP}*Public Health Reviews*, DOI : 10.1186/s40985-016-0047-y^[1]_{SEP}40985_2016_47. <https://publichealthreviews.biomedcentral.com/articles/10.1186/s40985-016-0047-y>.

Levy BS and **Patz JA**. Climate Change, Human Rights and Social Justice. *Annals of Global Health*, 2015; 81 (3); 310-322.

Goldberg T and **Patz JA**. The Need for a Global Health Ethic (Comment). *The Lancet*, July 16, 2015, [http://dx.doi.org/10.1016/S0140-6736\(15\)60757-7](http://dx.doi.org/10.1016/S0140-6736(15)60757-7).

Patz JA, Frumkin H, Haines A. Adapting to Climate Change – Reply, *JAMA*, 313 (7):727-8.

Lee E, Burkhart J, Olson S, Billings AA, **Patz JA**, Harner EJ. Relationships of Climate and Irrigation Factors with Malaria Parasite Incidences in Two Climatologically Dissimilar Regions in India. *J Arid Environments*, 2016, 124, 24-224.

Rodríguez-Villamizar LA, González BE, Vera LM, **Patz JA**, Bautista, LE. Environmental and Occupational Health Research and Training Needs in Colombia: A Delphi Study. *Biomédica: Revista del Instituto Nacional de Salud*, 2015 suplemento 2, Vol. 35, p58-65. 8p.

Patz JA, Grabow ML, Limaye VS. When it Rains, it Pours: Future Climate Extremes and Health. *Annals of Global Health*, Oct. 2014. <http://dx.doi.org/10.1016/j.aogh.2014.09.007>.

Patz JA and Hatch MJ*. Public Health & Global Climate Disruption. *Public Health Reviews*, 35 (1), 2014.

Patz JA, Frumkin H, Holloway T, Vimont DJ, Haines A. Climate Change: Challenges and Opportunities for Global Health. *JAMA*, 2014;312(15): 1565-1580. [217 citations, 1-3-2019]

Hahn* MB, Gangnon RE, Barcellos C, Asner GP, **Patz JA**. Influence of Deforestation, Roads, Selective Logging, and Fire on Malaria Risk in the Amazon Basin of Brazil. *PLOS*, Jan. 2014, 9(1): e85725. doi:10.1371/journal.pone.0085725.

Hahn* MB, Epstein JH, Gurley ES, Islam MS, Luby SP, Daszak P, **Patz JA**. Roosting Behavior and Habitat Selection of *Pteropus giganteus* Reveals Potential Links to Nipah Virus Epidemiology. *J Applied Ecology*, 2014 doi: 10.1111/1365-2664.12212.

Hahn* MB, Gurley ES, Epstein JH, Islam MS, **Patz JA**, Daszak P, Luby SP. The Role of Landscape Composition and Configuration on *Pteropus giganteus* Roosting Ecology and Nipah Virus Dynamics in Bangladesh. *Am J Trop Med*, 90(2), 2014, pp. 247–255.

Uejio* C, Borchardt M, Yale SH, Malecki K, Anderson HA, **Patz JA**. Drinking Water Systems, Hydrology, and Childhood Gastrointestinal Illness in Central and Northern Wisconsin. *Am J Public Health*, 2014.

Hahn* MB, Olson S, Vittor A, Barcellos C, **Patz JA**, Pan, W. Conservation Efforts and Malaria in the Brazilian Amazon. *Am J Trop Med*, 2013.

Patz JA and Hahn MB. Climate Change and Health: A One Health Approach. *Current Topics in Microbiology and Immunology*, 2012 (Nov): DOI: 10.1007/82_2012_274.

Baumgartner* J, Zhang Y, Schauer JJ, Ezzati M, **Patz JA**, Bautista LE. Household Air Pollution and Children's Blood Pressure. *Epidemiology*, 2012; 23(4), 641-642.

Bennett A, Epstein LD, Gilman, RH, Cama V, Bern C, Cabrera L, Lescano AG, **Patz JA**, Carcamo C, Sterling CR, Checkley W. Effects of 1997-98 El Niño Episode on Community Rates of Diarrhea. *Am J Public Health*, 2012; 102(7): e63-9.

Uejio* C, Peters T, **Patz JA**. Inland Lake Indicator Bacteria: Long-term Impervious Surface and Weather Influences and a Predictive Bayesian Model. *Lake and Reservoir Management*, 2012; 28(3), 232-244.

Grabow* ML, Spak SN, Holloway TA, Stone B, Mednick AC, **Patz JA**. Air Quality and Exercise-Related Health Benefits from Reduced Car Travel in the Midwestern United States. *Environmental Health Perspectives*, 2011; 120:68-76. [172 citations, 1-3-2019]

Baumgartner* J, Schauer JJ, Ezzati M, Lu L, Cheng C, **Patz JA**, Bautista LE. Indoor Air Pollution and Blood Pressure in Adult Women Living in Rural China. *Environmental Health Perspectives*, 2011, 119(10):1390-1395.

Li B, Sain S, Mearns LO, Anderson HA, Kovats RS, Ebi KL, **Patz JA**. The Impact of Heat Waves on Morbidity in Milwaukee, Wisconsin. *Climatic Change*, 2011; DOI 10.1007/s10584-011-0120-y. [54 citations, 1-3-2019]

L Ziska, K Knowlton, C Rogers, D Dalan, N Tierney, MA Elder, W Filley, J Shropshire, LB Ford, C Hedberg, P Fleetwood, KT Hovanky, T Kavanaugh, G Fulford, RF Vrtis, **JA Patz**, J Portnoy, F Coates, L Bielory, D Frenz. Recent Warming by Latitude Associated with Increased Length of Ragweed Pollen Season in Central North America. *Proceedings of the National Academy of Science (PNAS)*, 2011; doi/10.1073/pnas.10141071108.

- Olson* SH, Gangnon R, Silveira G, **Patz JA**. Deforestation Links to Malaria in Mancio Lima County, Brazil. *Journal of Emerging Infectious Diseases*, Vol. 16 (7) 2010:1108-1115.
- Olson* SH, Gangnon R, Elguero E, Durieux L, Guegan JF, Foley JA, **Patz JA**. Links Between Climate, Malaria, and Wetlands in the Amazon Basin. *Journal of Emerging Infectious Diseases*, 2009; 15(4): 659-662.
- Vittor* AY, Pan W, Gilman RH, Tielsch J, Glasss GE, Shields T, Sanchez Lozano, W, Pinedo VV, **Patz JA (Corresponding author)**. Linking Deforestation to Malaria in the Amazon: Characterization of the Breeding Habitat of the Principal Malaria Vector, *Anopheles darlingi*. *Am J Trop Med Hyg* 2009; 81(1):5-12.
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United Nations Intergovernmental Panel on Climate Change. Assessing the Potential Impacts of Climate Change upon Human Health. In *The United Nations IPCC Climate Change Assessment–1995*. Cambridge, Cambridge University Press, 1995 (served as “Principal Lead Author”).

Balbus JM. Human Health Impacts and Adaptation Assessment. In *Vulnerability and Adaptation Assessments: An International Handbook*. Dordrecht, Kluwer Academic Press, 1996 (contributing author).

Human Health. In *Climate Change Impacts Assessment Handbook*, UNEP, 1999 (contributing author).

Textboxes in Chapters

Patz JA and Levy BS. The Intergovernmental Panel on Climate Change and a Brief History of Organizational Responses to Climate Change. In Levy BS and **Patz JA** (eds). *Climate Change and Public Health*. Oxford University Press, 2015.

Grabow ML and **Patz JA**. How Epidemiology has Demonstrated the Health Co-benefits of Active Transport. In Levy BS and **Patz JA** (eds). *Climate Change and Public Health*. Oxford University Press, 2015.

Book Reviews

Patz JA. Linkages between Healthy Ecosystems and Sustainable Human Population Health. *New England Journal of Medicine*, 2009.

Patz JA. *Wilson Quarterly* 2001. Review of *Human Health & Global Climate Change: A Review of Potential Impacts in the United States* by John M. Balbus and Mark L. Wilson, Washington, DC: Pew Center on Global Climate Change, 2000.

Patz JA. Climatic Change 2000. Review of *Health and Climate Change: Modelling the Impacts of Global Warming and Ozone Depletion* by Pim Martens, Earthscan Publications Ltd., London, 1998.

Manuscript Review/Invited Back Cover Quote

“Lives Per Gallon: The True Cost of our Oil Addiction,” by Terry Tamminen.

Posters and Abstracts

Kjellstrom T, **Patz JA**, Otto M, Lemke B. Climate Change Increases Workplace Heat Stress Affecting Work Capacity and Occupational Health, Including Kidney Disease and Other Health Outcomes. *Occup Environ Med*, 2016, 73: Suppl 1, A97-A98.

Limaye* V, Harkey M, Holloway TA, Meier P, **Patz, JA**. Climate Change Impacts on Power Plant Emissions, Air Quality and Health in the U.S. Nelson Institute Earth Day Conference, Madison, April 16, 2012.

Harkey M, Holloway T, Meier P, Limaye V, **Patz JA**. Historic and Future Response of Air Quality to Climate in the Eastern United States - AGU Fall Meeting Abstracts, 2013.

Grabow* ML, Spak SN, Holloway TA, Stone B, Mednick AC, **Patz JA**. Air Quality and Exercise-Related Health Benefits from Reduced Car Travel in the Midwestern United States. *International Society for Environmental Epidemiology*. Columbia, SC, August, 2012 (won a student poster award).

Greene*, M BA; Bickford E, **Patz JA**, Holloway TA. Health Improvements of Truck to Train Freight Modal Shifts. *Global Health Symposium*, Madison, March 14, 2012.

Got Gas? Dairy Farm Manure Digestion as a Sustainable Development in Wisconsin. Plachinski S, Radloff G, Santana M, Starke J, Beattie R, **Patz JA**. *NSF Annual IGERT Meeting*, Washington DC, May, 2010.

Olson* SH, Gangnon R, Silveria G, **Patz JA**. Malaria and Deforestation in Mâncio Lima, Brazil. Presented at the *National Environmental Public Health Conference*, Atlanta, Georgia, October 26-28, 2009.

Olson* SH, Gangnon R, Elguero E, Durieux L, Foley JA, Guegan JF, **Patz JA**. Surprises in the Climate-Malaria Link in the Amazon. Presented at the *American Society of Tropical Medicine and Hygiene*, New Orleans, Louisiana, December 6-11, 2008.

Olson* SH, Gangnon R, Elguero E, Durieux L, Foley JA, Guegan JF, **Patz JA**. Geographical Patterns of Malaria - Can Climate Alter Malaria Patterns in the Amazon? Presented at the *American Population Health Association Annual Meeting*, San Diego, California, October 26-29, 2008.

Olson* SH, Gangnon R, Elguero E, Durieux L, Foley JA, Guegan JF, **Patz JA**. Malaria Patterns and Hydrology in the Amazon – Will Land Use and Cover Changes Alter Risk? Presented at the *US International Association for Landscape Ecology Annual Meeting*, Madison, Wisconsin, April 6-9, 2008.

Olson* SH, Cardille JA, Clayton MK, Bunnell JE, Heckle S, **Patz JA**. Determining Landscape-Scale Lyme Disease Risk Patterns in the Mid Atlantic Region, USA. Presented at the *US International Association for Landscape Ecology Annual Meeting*, Madison, Wisconsin, April 6-9, 2008.

Olson* SH, Gangnon R, Elguero E, Durieux L, Foley JA, Guegan JF, **Patz JA**. Precipitation Based Malaria Patterns in the Amazon – Will Deforestation Alter Risk? Presented at the *UW Global Health Symposium*, March 31, 2008.

Olson* SH, Gangnon R, Elguero E, Durieux L, Foley JA, Guegan JF, **Patz JA**. Role of Hydrology in the Transmission of Water-borne and Vector-borne Disease. Presented at the *American Geophysicists Union Fall Meeting*, San Francisco, California, December 10-14, 2007.

DellaValle C, Bell ML, Goldberg R, Hogrefe C, Rosenzweig C, Kinney, Rosenthal J, Knowlton K, Lynn B, **Patz JA**. An Estimate of Ambient Ozone Concentrations in the Eastern U.S. Under a Changing Climate. University of Connecticut, 2008.

Olson* SH, Gangnon R, Elguero E, Durieux L, Foley JA, Guegan JF, **Patz JA**. Malaria and Changing Landscapes Step One: Malaria and Precipitation Patterns in the Amazon. Presented at the *11th LBA-ECO Science Team Meeting*, Salvador, Bahia, Brazil, September 25-29, 2007.

Patz JA, Frumkin H, Klein M, Bell M, Ellis H, Hogrefe C, Rosenzweig, Kinney P. Childhood Asthma Projects for Atlanta Under a Future Climate Change Scenario. *Epidemiology*, July 2004, Volume 15, Issue 4, p. S97.

Focks DA, Kittel T, **Patz JA** (presenter). Future Lyme Disease Risk in North America: Simulation Studies under Climate Change Scenarios. *American Tropical Medicine and Hygiene*, Annual Conference, Philadelphia, December 2003.

Vittor* A, **Patz JA** (presenter), Glass G, Shields T, Tielsch J, Gilman R. Deforestation and Malaria in the Peruvian Amazon, USGS, National Conference Health-Related Research, *Natural Science and Public Health*, April 2003.

Patz JA (presenter), McGeehin MA, Bernard SM, Ebi KL, Epstein PR, Grambsch A, Gubler DJ, Reiter P, Romieu I, Rose JB, Samet JM, Trtanj J. US National Assessment – Health Sector. *WHO Conference on Climate, Health, and Small Island Nations*, Barbados, May 2002.

Vittor* A, **Patz JA** (presenter), Epstein L, Orellana M, Glass G, Shields T, Gilman R. Deforestation Effects on Malaria in the Amazon: Application for Remote Sensing. International Geosphere Biosphere Program (IGBP), *Global Change Open Science Conference*, Amsterdam, July 2001.

Gil A, Huq A, Lanata C, Taylor D, Orozco R, Rivera I, **Patz JA**, Colwell R. Environmental Source of *Vibrio cholerae* on the Peruvian Coast. *35th US-Japan Cholera and Other Bacterial Enteric Infection Joint Panel Meeting*, December 1999.

Patz, JA, Curriero F, Rose J, Lele S. Water-borne Diseases and Extreme Precipitation: Preliminary Results (Poster Session). *International Conference on Emerging Infectious Diseases*, CDC, Atlanta, March 1998.

Featured in Popular News

Forbes Magazine (2019): Climate Change Best Case Scenario: Save Millions, Make Trillions. <https://www.forbes.com/sites/chunkamui/2019/09/26/climate-change-best-case-scenario-save-millions-make-trillions/#1bac6620f5e8>

Rotary International (2017): <https://www.rotary.org/en/rotarian-conversation-your-health-risk>

The Guardian (2014): https://www.theguardian.com/environment/climate-consensus-97-per-cent/2014/oct/06/tackling-global-warming-improve-health-save-lives-money?CMP=tw_t_gu

Op Eds or Invited Blogs (since 2012)

Reasons for Hope against the Novel Coronavirus. WI State Journal, April 4, 2020: https://madison.com/wsj/opinion/column/jonathan-patz-reason-for-hope-against-the-novel-coronavirus/article_ca5e0ff0-f1fb-5cfe-ad0e-e7df8676d330.html

Fix Roads and Bridges, but Also Public Health. WI State Journal, February 10, 2018: http://host.madison.com/wsj/opinion/column/jonathan-patz-fix-roads-and-bridges-but-also-public-health/article_85cda45b-d569-5ba1-98b8-5939b9b0dba9.html

Quitting Coal: A Health Benefit Equivalent to Quitting Tobacco, Alcohol and Fast-Food. *The Guardian*, September 24, 2017: <https://www.theguardian.com/commentisfree/2017/sep/25/quitting-coal-a-health-benefit-equivalent-to-quitting-tobacco-alcohol-and-fast-food>

Tax on Hybrids and Electric Vehicles is Poor Economic Policy. *Milwaukee Journal Sentinel*, September 13, 2017: <http://www.jsonline.com/story/opinion/contributors/2017/09/13/patz-tax-hybrids-and-electric-vehicles-poor-economic-policy/661565001/>

Carpenter SR, Kutzbach JE, Magnuson JJ, Turner MG, **Patz, JA**, Temple A, Waller DM. Purging DNR's Website Doesn't Change Climate Facts. *Milwaukee Journal Sentinel*, January 9, 2017: <https://www.jsonline.com/story/news/local/wisconsin/2017/01/09/dnr-scrubbed-climate-wording-after-query/96339644/>

Patz JA. Preventing the Spread of Zika Requires Addressing Poverty. *Huffington Post*, April 29, 2016: https://www.huffingtonpost.com/jonathan-patz/preventing-the-spread-of-zika-poverty_b_9800024.html

Frumkin and **Patz JA**. Climate Change: More Losers than Winners. *The Wall Street Journal*, April 13, 2016:

<https://www.wsj.com/articles/climate-change-more-losers-than-winners-1460583835>

Patz JA and Vargo J. Sustainable Cities Work for Climate Change. *Huffington Post, The Blog*, June 29, 2015:

https://www.huffingtonpost.com/jonathan-patz/sustainable-cities-work-for-climate-change_b_7174242.html

Patz JA. There's a Strong Link Between Solving the Global Climate Crisis and Improving Our Health. *Huffington Post, The Blog*, November 30, 2014:

huff.to/YHubPQ

Vargo J and **Patz JA**. On the (Bike) Path to Prosperity: Why Banning Bikes is Bad for Kolkata. *Huffington Post*, January 23, 2014:

https://www.huffingtonpost.com/jason-vargo/kolkata-bike-ban_b_4157234.html

Patz, JA. Curbing Fossil Fuels to Power a Public Health Revolution. *Huffington Post*, May 11, 2013:

https://www.huffingtonpost.com/jonathan-patz/curbing-fossils-fuels_b_3253415.html

Patz JA. Swapping Tail Pipes for Pedals: Small Changes Could Pay Huge Dividends For Public Health And Economy. *Huffington Post*, January 2, 2012:

<http://tinyurl.com/patzcobenefits>

Television and Radio Interviews (since 2016)

Climate Change and Health. *The Morning Show*, Wisconsin Public Radio, January 8, 2019:

<https://www.wpr.org/node/1386216>

Renewable Energy Health Benefits Outweigh Financial Cost. *ABC (Australia)*, September 25, 2017:

<http://www.abc.net.au/radionational/programs/breakfast/renewable-energy-health-benefits-outweigh-financial-cost/8980402>

Doctors Warn of Health Risks in Withdrawal from Paris Climate Accord. June 8, 2017. *TV News 3*, Madison, WI:

<http://www.channel3000.com/health/doctors-warn-of-health-risks-in-withdrawal-from-paris-climate-accord/532215144>

How Climate Change Is Cranking the Heat On Public Health Crises. *WBUR Radio*, September 23, 2016:

<http://www.wbur.org/hereandnow/2016/09/23/climate-change-public-health>

Communicating to Press and Public

Q & A with Rotary International, Summer 2017:

<https://www.rotary.org/en/rotarian-conversation-your-health-risk>

Interviewed by many news journalists (including Washington Post, LA Times, NY Times, Associated Press, Reuters, NPR, CNN, ABC, BBC News, Toronto Star, CBS, USA Today, Science News, Knight Ridder, Newsweek, Scientific American, and many more national and international media outlets).

NOTE: To view >400 Archived news pieces referring to Jonathan Patz go to:

<https://www.google.com/search?q=Jonathan+Patz&tbs=ar:1&tbn=nws&ei=pK8tWtTVPM6MjwOds4XoBw&start=0&sa=N&biw=1396&bih=1007&dpr=1>

CURRICULUM VITAE
JONATHAN ALAN PATZ, MD, MPH

PART II

TEACHING

Mentoring

Faculty

Sam Younkin
Parvarthy Pillai
Anna Martinez-Donate
Paul Peppard

Post docs

Valerie Stull, PhD, MPH (2018-current)
Jason Vargo, PhD, MPH (2016-2019)
Maggie Grabow, PhD, MPH (2016-2017)
Micah Hahn, PhD (Feb. 2013-May, 2013)
Nicolas Preston PhD, June, 2009-2012
Sarah Olson, PhD, April 2010-March, 2011

Advisees (current)

Doctoral

Nick Maillous (September 2019)
Daritza de los Santos (September 2019)
Dorothy Lsoto (January 2020)
Sam Kruse (September 2020)
Thomas Leffler (January 2021)

Masters

Nova Tebbe (September 2019)

Graduated:

Rachael Sippy, PhD (May 2018), *Climate and Dengue Fever*.
Post doc, University of Florida and SUNY-Upstate where she will continue to study the role of climate and the built environment on mosquito-borne illnesses.

Melissa Hatch, PhD (May 2018), *Ethics on Climate Change*.
Post doc, Duke University working with Professor Drew Shindell on climate, energy, and health.

Valerie Stull, PhD (October 2017), *Health and Sustainable Agriculture*.
Minilivestock Feasibility in Zambia, Mealworm Amino Acid Analysis and Cricket Powder and Gut Microbiome Cross-over Study.

Aleia McCord, PhD (May 2016), *Biogas and Sustainable Development in Uganda*.
Academic Staff, International Division, UW-Madison.

Vilay Llmaye, PhD (May 2014), *Climate and Air Pollution Modeling in US and India*.
Postdoctoral Epidemiology Intelligence Service (EIS), California Department of Public Health.

Maggie Grabow, MPH, PhD (May 2013), *Health Co-Benefits from Alternative Transportation and Urban Design*. Postdoctoral Fellow, University of Wisconsin-Madison.

Suzanne Gaulocher, PhD (May, 2013), *Community-based Participatory Research on Urban Health*.

Postdoctoral Fellow, Stanford University; Assistant Professor, New Hampshire (Fall 2017).

Micah Hahn, PhD (February 2013), *Land Use and Forest Composition Effects on the Ecology of Vector-borne and Zoonotic Disease*.

Post doc, joint with the Center for Disease Control and Prevention (CDC) and the National Center for Atmospheric Research (NCAR); Assistant Professor, University of Alaska (2017).

Chris Uejio, PhD (May 2011), *Climate Change and Health Effects for the US*.

Post doc, joint with the Center for Disease Control and Prevention (CDC) and the National Center for Atmospheric Research (NCAR); Assistant Professor, University of Florida (2013).

Jill Baumgartner, PhD (October 2010), *Biomass Smoke Exposure Effects on Blood Pressure in Chinese Women*.

Associate Professor, McGill University.

Sarah Olson, PhD (December 2009), *Land Use Change and Vectorborne Diseases*.

Post doc, jointly with UC-Davis and Wildlife Conservation Society.

Amy Vittor, PhD (March 2003; Co-advisor with Dr. James Tielsch), *A Cross-Sectional Malaria Prevalence Study in the Peruvian Amazon: is Deforestation a Risk Factor for Malaria?*

Preventive Medicine Fellows Mentor

Odi Ezenwanne, MD (2017- 2019)

PhD Committee Member

Johnny Uelmen, PhD (August 2020)

Chisato Fukuda, PhD (December 2017)

Kaja Rebane, PhD (November 2017)

Kevin Burke, PhD (June 2016)

Linda Pfeiffer, PhD (May 2014)

Bill Buckingham, PhD (May 2012)

Jeremy Chapman, PhD (December 2011)

Jeff Sledge, PhD (May 2011)

Laurie Hartjes, PhD (May 2010)

DELTA Certificate Defense Committee Member

Erica Howard (December 2006)

DrPH

Samar Khoury (matriculated, January 2004, Johns Hopkins University)

Masters

Johnny Uelmen (2017)

Marshall Green (2012)

Christopher Moberg (2011)

Clara Arias (2010)

Miles Kirby (2009)

Megan Christenson (2009)

Maggie Grabow (2007)

Amy Kasper (2002)

Professional Masters

Daritza del los Santos (2020)

MPH Capstone Committee Member

Ian Ryan (2018) – Carbon Tax and Equity

Joel Charles (2012) – Sustainable Energy

Rebecca Osborn (Summer 2011) –Lyme Disease
Colleen Moran (Summer 2011) – Walkability
Cara Williams (Summer 2011) – Biogas
Maggie Grabow (Summer 2010) – Built Environment

MPH

Ben Stading (2010)
Jason Ricco (2009)
Maria Bastin (2009)
Elizabeth Pleuss (2009)
Dwayne Mayal (2007)
Mary Makarushka (May 2007)
Jeffrey Hartman (2006)
Stacey Lindenau (2006)
Ana Maria Pasatiempo (2005)
Samar Khoury (2003)
Salua Osorio (2003)
Carolyn Leep (2001)
Cynthia Snider (2001)
Mirette Habib (2000)

Reading/Special Studies Courses

Jessica Athens (Spring 2007) – Built Environmental and Health
Dwayne Myal (Spring 2007) – Nanotechnology and Health

Preliminary Oral Participation

Andres Lescano
Mark DiMenna
Scott Shone
Amy Vittor
Seungthaworn Weeraporn

Final Oral Participation

Amy Vittor, PhD (2003)
Jingyee Kou, PhD (2000)
Jason Longwell, MHS (1999)
Joe Bunnan, PhD (1999)

Second Reader

Shehnaz Hussein, MS (2002)
Lisa Strug, ScM, (2001)
Susan Cameron, MHS (2000)
James Star, MHS (2000)

PhD Thesis Reader for Non-Hopkins Students

Simon Hales, University of Otago, New Zealand (2001)
Nancy Damman Davis, Columbia University, Earth Institute (2004)

Integrating Experience Mentor

Thomas Arminio (2003)
Dawn Carlson (2003)
Richard Freese (2003)
Brenda Gumbs-Petty (2003)
Thomas Hendricks (2003)
Sarah Henn (2003)
Ravishanker Kamath (2003)
Mark Maire (2003)

Daniel Schwartz (2003)
Jeanne Warfield (2003)
Teresa Zyczynski (2003)
Traci Brown (2002)
Donald Shepley (2002; reviewed paper only)

Preventive Medicine Rotation Supervisor

Cindy Lou Parker, MD, MPH (2000-2001)

Medical School Elective Rotation Supervisor

David Engelberg (1999)

CLASSROOM INSTRUCTION

Courses Directed at the University of Wisconsin

Current Ongoing Classes

PHS/ENVIR ST 739, Climate Change & Planetary Health (started Spring 2021)
ENTO/ENVIR ST 205 (started Fall 2020)
PHS 728, Climate Change & Medicine (started 2019); 2-credit Medical Selective
PHS/ENV ST 560, Health Impact Assessment of Global Environmental Change (started 2018)
ENVIR ST 900, Research Independent Study (started 2005)

Past Classes

IES 900: Graduate Seminar (Spring 2005)
IES 400: Global Environmental Change and Disease Risk (Fall 2005)
PHS 650: Health Risk Assessment of Global Environmental Change (Spring 2006, 2007)
IES 919: Environmental Health: Past and Current Perspectives; co-directed with Greg Mitman (Fall 2006)
IES 900: Integrative Research Methods for Humans and the Global Environment (Fall 2007)
PHS/ENVST 740: Health Impact Assessment of Global Environmental Change (2007-2017)
PHS 650: MPH Summer Institute Course: "Global Environmental Public Health" (Summer 2008-2011)
ENVIR ST 900: Global Health and Transportation (Fall 2019)

Guest Lecturer in the Following UW Courses

MIU Certificate in Global Health (lecture in all 3 required courses)
IES/ Bioclimatology
GHI Quality Improvement Workshop
Sociology/Educating for Global Change
Sociology/Population Problems
Vet. Med./ Wildlife Diseases
PHS/ Air Pollution and Health
PHS/ Epidemiology of Infectious Diseases
PHS/ Introduction to Population Health Sciences Concepts and Methods
PHS/ Introduction to Public Health, MPH Seminar
PHS/ Introduction to Epidemiology
PHS/ Global Health
Parasitology
Zoology/ Responses to Global Warming
Physicians as Health Activists
PA Program on Global Health
Soils/ Assessment of Environmental Impacts
Biol/ Ways of Knowing Biology (undergrad)

Workshops

Chaired NSF RCN-funded 5-day workshop on the Ecology of Infectious Diseases for the Consortium for Conservation Medicine, Madison, June 11-15, 2012.

UW-Specific Presentations

One Health, November 10, 2017
 UW Climate Change Forum, March 27, 2014
 PLATO Sessions, Madison, April 8, 2013
 Wisconsin Alumni Association, Shanghai, October 24, 2012
 Wisconsin Alumni Association, Seattle, April 25, 2012
 Chancellor's Fireside Talk, April 14, 2012

Education website /outreach to K-12

<http://www.ecohealth101.org> (2003-2015)

Courses at Johns Hopkins University

Course Director

"The Global Environment and Public Health"

Co-Instructor

"Global Change and Health," Principal Instructor: George Fisher, School of Arts and Sciences

Lecturer for Other Courses at Johns Hopkins

Occupational & Environmental Health, School of Medicine
 Clinical Occupational Medicine
 Health Effects of Indoor and Outdoor Air Pollution
 Emerging Infections
 Biological Basis of Public Health
 Foundations in International Health
 Tropical Environmental Medicine
 Summer Institutes (Environmental Health, Epidemiology, Tropical Medicine)
 Winter Institute (Tropical Medicine and International Health)
 University of Maryland, School of Medicine (1-2 lectures/year)

RESEARCH GRANT PARTICIPATION

Current

Health and Air Quality Applied Sciences Team: Broadening the use of Satellite Data for Health and Air Quality Management

NASA	\$1,000,000	2/1/2021 – 1/30/2025
Co-I: J Patz		

Communicating Health Risks and Solutions for the Climate Crisis in Wisconsin

Brico Fund	\$176,000	1/1/2020 – 12/31/2021
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PI: J Patz

Co-Benefits of Climate Actions for Air and Health in India
Wellcome Trust – Climate Change & Health Award \$1,000,000 10/2019 – 9/2022
PI: Kim Knowlton (NRDC)
Science Consultant: J Patz

Complex Urban Systems for Sustainability and Health (CUSSH)
Wellcome Trust \$241,000 2/2018 – 1/2022
PI for subcontract – J Patz (180,000 GBP)

RCN: EcoHealth Net 2.0 A One Health Approach to Disease Ecology Research & Education
NSF grant # 1618919 \$499,897.00 9/2019 – 8/2022
PI: Jon Epstein (UW-Madison lead, J Patz)

Impact and Future Sales Potential of Farmed Edible Insects in Zambia
WARF Contemporary Social Problems Initiative
PI: J Patz
*Component of “Six-Legged Livestock – Potential for Farmed Insects to Improve Health and Food Security” \$100,000 9/2019 – 8/2021
PIs: S Paskewitz and V Stull

Modeling Health Benefits from Biking Scenarios in the US
Trek Bicycle Corporation \$12,000 7/2020– 2/2021

Current Private Donor Funding

Dave and Sarah Epstein	Planetary Health Graduate Scholars	\$125,000
Dave and Sarah Epstein	Planetary Health Postdoc	\$152,000
Gayle Coleman	Environment and Health	\$ 200,000
Gottesman Fund	Climate Change and Health	\$150,000
Baltimore Community Trust	Climate, Energy, and Health	\$50,000

Past Funding

Development of A Forecast-based Flood and Health Risk Management System to Support Advanced Disaster Preparedness
UW2020 \$440,000 9/2018 – 8/2020
PI: Paul Block
Co-PI: J Patz

Health and Air Quality Applied Sciences Tram (HAQAST)
NASA \$900,000 10/2016 – 9/2019
PI: T Holloway
Co-I: J Patz

Global Environmental and Occupational Health (GEOHub) for East Africa
NIH Fogarty International Program \$254,703 9/2015 – 8/2020
PI for subcontract: J Patz

Bike-Friendly Bahir Dar
UW International Division \$50,000 9/2016 – 6/2018
PI: J Patz

Health and the Ethiopian Climate Resilient Green Economy Initiation
Fulbright Scholars Award \$40,000 3/2015 – 7/2015
(plus expenses)

Building, Serving, Learning: Biogas in Uganda

Baldwin Wisconsin Endowment PI: J Patz	\$63,019	9/2013 – 8/2014
Climate Change Impacts on Power Plant Emissions, Air Quality and Health in the US NIH 1R21ES020232-01 Goal is to model health impacts from combined risks of climate effects on air quality with additional expected pollution from power plant emissions to meet increased energy demand during heatwaves. PI: J Patz	\$150,000	8/2011 – 4/2014
IGERT: Vulnerability and Sustainability in Coupled Human-Natural Systems: An Integrated Graduate Education and Research Traineeship in Global Environmental Studies NSF PI: J Patz	\$3,089,670	6/2006 – 5/2013
Linkages Between Ecosystems and Public Health Conservation International PI: J Patz	\$50,000	7/2011 – 12/2011
EcoHealthNet: Ecology, Environmental Science and Health Research NSF Research Coordinating Network (RCN) PI: P Daszak Co-PI: J Patz	\$497,121	9/2010 – 8/2015
Developing a State-Level Health Impact Assessment of Climate Change in Wisconsin CDC Goal is to develop a state-level health impact assessment of climate change in Wisconsin by assessing health risks from current and future climatic events based on downscaled climate change model projections to the state level. PI: H Anderson Co-PI: J Patz (PI for UW-Madison subcontract)	\$900,000	9/2009 – 9/2012
Evaluating Participatory Photo Mapping for Improved Community Health Promotion UW Institute for Clinical and Translational Research (ICTR) PI: J Patz	\$39,596	9/2009 – 8/2010
Sustainable Public Health: Research and Training Program The Gottesman Fund PI: J Patz	\$240,000	10/2008 – 9/2011
Consortium for Conservation Medicine (Nelson Institute being a participating member institution) PI: J Patz	\$17,000	11/2007 – 7/2009
Health Risks from Climate Variability and Change in the Upper Midwest: A Place-based Assessment of Climate-related Morbidity US EPA PI: J Patz	\$598,599	2/2006 – 1/2010
Evaluating Changes in Regional- to Global-Scale Ecosystem Services Provided by Amazonian Rainforests NASA, LBA-ECO PI: J Foley Co-PI: JPatz	\$730,000	6/2006 – 5/2009
EcoHealth Forum (International Conference) - 2008 CDC NASA	\$15,000 \$15,000	

NIH (NIEHS)	\$10,000	
UN Foundation	\$10,000	
PI: J Patz		
Globalization and Human Well-being: Environment, Health, and Security		
UW–Madison		
Center for World Affairs & the Global Economy (WAGE)	\$125,000	6/2005 – 5/2008
Co-PI: J Patz, Senior Fellow (also with two other faculty)		
International Environmental Health and Security		
UW–Madison		
Global Environmental Studies Research Circle	\$50,000	2004 – 6/2007
Co-PI: J Patz (with Clark Miller)		
RWJ Transdisciplinary Studies in Health and Society		
Robert Wood Johnson Health & Society Scholars Program	\$40,000	3/2005 – 2/2006
PI: Linda Hogle		
RWJ Workshop on Transdisciplinarity: Advancing Training in Environmental Studies		
Robert Wood Johnson Health & Society Scholars Program	\$10,000	3/2005 – 10/2005
PI: J Patz		
Global Environmental Change & Health: Research and Assessment		
The Gottesman Fund	\$75,000	1/2004 – 6/2004
PI: J Patz		
NCAR Climate/Health Program Development		
National Center for Atmospheric Research (NCAR)	\$15,000	1/2004 – 10/2004
PI: J Patz		
<i>Objective:</i> Develop and Co-Chair a Summer Institute on Climate and Health Research Methods.		
WHO Synthesis Report on Health Effects Relevant to the International Conventions on Biodiversity, Desertification, and Climate Change		
	\$10,000	11/2003
PI: J Patz		
Future Climate Change and Air Pollution		
Natural Resources Defense Council (NRDC)	\$52,325	1/2003 – 5/2004
PI: J Patz		
<i>Objective:</i> Model the change in air pollution and subsequent mortality due to future projections of global climate change in the Mid-Atlantic region.		
Johns Hopkins Bloomberg School of Public Health		
Technology Transfer Committee	\$25,000	2/2003 – 1/2004
PI: J Patz		
<i>Objective:</i> Disseminate our newly developed web-based middle school curriculum on global environmental change and health.		
Roadmap Report of the Health Effects of Climate Change for California		
California Energy Commission	\$21,700	5/2003 – 12/2003
PI: J Patz		
Public Health Benefits from the Heat Island Reduction Initiative		
EPA Office of Air and Radiation	\$25,426	7/2002 – 7/31/2003
PI: J Patz		
<i>Objective:</i> Assess mortality from heat waves across the largest US cities.		
<i>Responsibilities:</i> Direct analysis in collaboration with Biostatistics and write up of findings.		
Unhealthy Landscapes: How Land Use Change Affects Disease Emergence		

Wildlife Trust PI: J Patz <i>Objective:</i> To convene a conference on land use change and disease emergence and complete a proceedings from the conference.	\$70,000	1/2002 – 12/2002
Global Environmental Change and Health Communication Initiative EPA Office of Air and Radiation PI: J Patz <i>Objective:</i> Major objective is to expand the climate change and stratospheric ozone depletion module of the children's education website project.	\$73,000	7/1/2001 – 6/30/2002
Deforestation and Malaria in the Amazon New York Community Trust PI: J Patz <i>Objective:</i> Add a human epidemiology component to the analysis of relationship between deforestation and the risk of malaria transmission in the Peruvian Amazon. <i>Responsibilities:</i> Supervise graduate student in the field, and coordinate all analyses.	\$84,936	7/2002 – 6/30/2003
Deforestation and Malaria: Communicating New Findings to the Public and to Policy Makers Overbrook Foundation PI: J Patz <i>Objective:</i> To convene a conference on land use change and disease emergence and augment our educational website in this area.	\$25,000	9/2001 – 8/2002
Overbrook Foundation Gift to the Program on Health Effects of Global Environmental Change	\$10,000	2001
Eastern Research Group PI: J Patz <i>Objective:</i> Analyze the link between climate extremes and violent crime and MVAs. <i>Responsibilities:</i> Supervise post-doc, and collaborate with the JHU Injury Prevention Center in completing a white paper for an EPA National Conference on the subject.	\$2,400	1/2001 – 5/2001
Asthma and Future Climate Change in Metropolitan Atlanta Supplement to "Health Effects of Global Climate Change" Cooperative Agreement CR823143 US EPA, Office of Policy PI: J. Patz <i>Objective:</i> Combine urban heat island effect with air pollution climate simulation modeling to project future asthma and respiratory illness for metropolitan Atlanta. <i>Responsibilities:</i> Coordinate linkage of urban heat island model with Models 3 air pollution modeling, and ultimately ER data from Atlanta.	\$74,000	10/2000 – 8/2001
Implications of Climate Change for Regional Air Pollution, Health Effects and Energy Consumption Behavior US EPA (STAR Grant Program) Office of Research and Development PI: Hugh Ellis <i>Objective:</i> Conduct air pollution emissions and climate simulation modeling, and link to human health outcome projections. <i>Responsibilities:</i> Co-PI: J Patz: (15%) Responsible for epidemiological aspects of study. Supervise a graduate student, programmer, and work with biostatistician.	\$1,376,739	1/2001 – 9/2003
Climate Variability and Childhood Infectious Diseases in Peru National Oceanic and Atmospheric Administration (NOAA) PI: J Patz <i>Objective:</i> Analyze relationship between El Niño pediatric diarrheal disease and ARI in Lima.	\$150,000	10/1/2001 – 8/31/2003

Responsibilities: Coordinate climate and public health analyses.

Deforestation and Malaria in the Amazon
New York Community Trust \$257,000 3/2000 – 3/2002
PI: J Patz

Objective: Analyze relationship between deforestation and the risk of malaria transmission in the Peruvian Amazon.

Responsibilities: Supervise graduate student in the field, and coordinate all analyses.

The Global Environmental Health Education Initiative
Jewish Communal Fund of New York \$50,000 9/2000 – 9/2001
PI: J Patz

Objective: Develop web-based educational material on global environmental change.

Responsibilities: Supervise program coordinator, educator, science writer, and consult with JHU website development team.

NASA, Mission to Planet Earth 1998 – 2001
PI: IBM

Hopkins subcontract PI: Greg Glass (total IBM/Hopkins budget ~\$ 3 million)

My funding level 8% salary plus allocated research assistant or technician.

Objective: Implement satellite remotely sensed data to predict multiple health outcomes.

Responsibilities: Co-investigation to apply GIS and integrated assessment.

US National Assessment: Potential Consequences of Climate Variability and Change
US EPA Office of Research and Development \$900,000 7/1998 – 9/2001
Cooperative agreement
PI: J Patz

Objective: Conduct national assessment of climate change health impacts for the US Global Change Research Program.

Responsibilities: Co-Chair and Co-Convening Author for health sector.

Supported at 25%, 30%, and 30% salary over three years respectively; this also funded one new EHS faculty member, as well as a student and a one-half Research Assistant.

Pfiesteria & Climate Time-Series and Geographic Analysis
CDC (Subcontract through Batelle) \$76,410 10/1/1998 – 9/30/2000
PI: J Patz

Objective: Analyze relationship between climate variability, nutrient loading and toxic *pfiesteria* fishkills along the eastern seaboard.

Responsibilities: Coordinate acquisition of USGS, USDA, NOAA, and toxic fishkill databases for time-series and GIS analysis by collaborators.

Colloquium on Climate Variability and Human Health
NSF \$15,000 June 1997
PI: J Patz
Co-PI: Rita Colwell

Objective and Responsibilities: Develop and organize an international colloquium and write a policy report of the American Society of Microbiology.

Integrated Assessment of the Public Health Effects of Climate Change for the US and US Territories
US EPA, Office of Research and Development (ORD) \$2.7 million* 10/1996 – 9/2000
*\$2.7 million over three years, plus \$79,000 supplement.

PI: J Patz

Objective: Conduct integrated assessment of climate change health impacts primarily from vector-borne and water-borne diseases and from weather disasters.

Responsibilities: Overall PI coordinating basic research, integrated modeling and risk communication.

Supported at 25%, 35%, and 40% salary over three years respectively.

Health Effects of Global Climate Change, Cooperative Agreement
 US EPA, Office of Policy, Planning and Evaluation
 Direct Costs = \$105,486, 1995-1996; \$126,300, 1996-1997; \$240,000, 1997-1998)
 PI: J Patz (originally at 100% funding; deferred through 9/30/1999 as other grants awarded)
Objective: Interdisciplinary assessment of the health effects anticipated from global climate change.
Responsibilities: Coordinate research, risk communication and outreach.

Teaching Module on Public Health and Climate Change
 US EPA, Office of Policy, Planning and Evaluation \$93,773 10/1/1995 – 12/31/1996
 (within cooperative agreement above)
 PI: J Patz
 Project manager: Dr. Joan Aron at 50% salary support
Objective: Develop a textbook related to global ecological change and public health.
Responsibilities: Assemble task group of experts, participate in concept and outline development, and co-edit textbook with Dr. Aron.

ACADEMIC SERVICE

UW-Madison

Member of:

- Director, UW Global Health Institute, 2011-current
- Advisory Committee Member, International Studies Division, 2012-2014
- Academic Planning Committee (APC), International Studies Division, 2015-current
- Academic Planning Committee (APC) of the Nelson Institute, 2016-2019
- Chair, Promotions Committee, UW MPH Program, 2011-2014
- Chair, Ped-Bike Subcommittee, UW Transportation Committee, 2010-2012
- Academic Planning Committee (APC) of the Nelson Institute, 2008-2011
- Chair, Investigator's Council, Center for Sustainability & the Global Environment (SAGE), 2008-current
- MS/PhD Population Health Steering Committee, 2008-current
- The Nelson Institute, CHANGE IGERT Committee, 2007-current
- University Accreditation Committee (Global subcommittee) 2007-2009
- MPH, Student Promotions Committee, 2007-current (Chair since 2012)
- MPH Admission Committee, 2006-2007
- UW Biological Sciences Research Committee, 2006-2009
- Global Biological Threats Steering Committee, 2006-2008
- Global Environmental Studies Research Circle, 2005-2010
- MPH Steering Committee, 2005-current
- Center for Global Health Steering Committee, 2004-2011

The Nelson Institute Governing Faculty, 2004-current

Faculty Search Committee Member for:

Vice Provost and Dean, International Division, 2013-2014
Global Biological Threats, 2008-2010
Director, State Laboratory of Hygiene, 2005-2006
SAGE Cluster Hire, 2006-2007
Global Biological Threats, 2007
PHS Infectious Disease Epidemiologist, 2007
Director of the Nelson Institute, 2007

Solicited letter writer for tenure track promotion at UW-Madison:

Girama Tefera
Ajay Sethi
Kurt Reed
Holly Gibbs
James Schauer (named professorship)
Tony Goldberg
Samer Alatout
Rick Keller
Volker Radeloff
Jon Foley (Gaylord Nelson Distinguished Professorship, co-writer)
Gregg Mitman (for Chair of the Department of Medical History and Bioethics)

Other Universities

Tony Capon, Monash University (Australia)
Jeremy Hess, University of Washington-Seattle
Susanne Sokolow, Stanford University
Alonso Aguirre, University of Maryland
Sandra McLellan, University of Wisconsin-Milwaukee
Patrick Kinney, Columbia University
Simon Hales, University of Otago, New Zealand
Colin Butler, Australian National University
Marie O'Neill, University of Michigan
Mercedes Pascual, University of Michigan
Guiyan Yan, University of California-Irving
Sandra McLellan, University of Wisconsin-Milwaukee
Nathan Wolfe, UCLA
Bruce Wilcox, University of Hawaii
Erin Lipp, University of Georgia
Leila Harris, University of British Columbia
Hillel Koren, Nicholas Professorship in Global Change, Duke University
Jan Semenza, Portland State University
Tony McMichael, Australian National & Medical Research Council, Fellow
Shuyi Zhang, as Fellow of the Chinese Academy of Sciences
Alfred Sommer, as Honorary Fellow of the London School of Hygiene and Tropical Medicine

Johns Hopkins University

Department

Course director for EH II: *The Global Environment and Public Health*, 4th quarter, and also for the Winter Institute
Divisional Seminar Lectures and Research in Progress Presentations
Member, Admissions Committee for Masters and Doctoral Candidates

School

Member, Committee on Human Research, July 1999-October 2002
Member, Committee on Graduate Medical Education, October 2002-current

PRESENTATIONS

Named Lectureships and Keynote Addresses

Reuel A. Stallones Memorial Endowed Lecture Series for the University of Texas School of Public Health (via webinar), November 4, 2020.

Keynote, Climate Justice Meets Global Health, University of Illinois-Chicago, May 4, 2020.

Keynote, Earth Day 50th Anniversary, UW-Madison Nelson Institute, April 20, 2020.

Keynote, 1st Caribbean Planetary Health Conference, Pan American Health Organization (PAHO) and University of the West Indies, Port of Spain, Trinidad, January 19, 2020.

Keynote, National Center for Wildlife Health, Workshop on Climate Change and Wildlife Health, Madison, January 7, 2020.

Keynote, Inaugural meeting of the Wisconsin Health Professionals for Climate Action, Milwaukee, November 16, 2019.

Lois K Cohen Distinguished Endowed Lectureship, University of Sciences, Philadelphia, October 24, 2019.

Keynote, NSF-NIH-USDA sponsored Research Coordination Network on the Macroecology of Infectious Disease, Duke University, Durham, September 26, 2019.

Plenary Keynote, *Global Environmental Health in the Anthropocene*, Consortium of Universities for Global Health (CUGH), Chicago, March 8, 2019.

Frank Nelson Distinguished Lecture, Montana State University, Bozeman, January 29, 2018.

Keynote Banquet Speaker, Combat Blindness International, Madison, October 10, 2018.

Keynote, EcoHealth International, Annual Conference, Cali, Colombia, August 16, 2018.

Keynote, Global Health Day, Yale University, New Haven, March 29, 2018.

Keynote, Rotary International, President's Conference, Vancouver, February 10, 2018.

Plenary Keynote, *Confronting the Global Climate Crisis; Greatest Public Health Intervention of our Times*, American Public Health Association, Atlanta, November 6, 2017.

TEDx: Climate Change is Affecting our Health. What's the Cure? Oshkosh, November 4, 2017.
https://www.youtube.com/watch?v=r_Dpkn_wi54

Dean's Distinguished Lecture, Case Western Reserve University, Cleveland, October 6, 2017.

Keynote, International Society for Environmental Epidemiology, Sydney, September 25, 2017.

Keynote, American Academy of Pediatrics, Chicago, September 18, 2017.

Plenary Keynote, *Zika and Environmental Factors*, Rotary International, Atlanta, June 12, 2017.
<https://www.rotary.org/en/rotarian-conversation-your-health-risk>

Opening Keynote, Rockefeller/Lancet Commission, Inaugural conference on Planetary Health, Boston, April 28, 2017.

Opening Keynote, National Academy of Sciences, Roundtables on Environmental Health and on Public Health, Washington, March 13, 2017.

<http://nationalacademies.org/hmd/Activities/PublicHealth/PopulationHealthImprovementRT/2017-MAR-13/Videos/Welcome/2-Patz-Video.aspx>

Banquet Dinner Keynote, Physicians for Social Responsibility, Seattle, March 11, 2017.

Dean's Distinguished "Spotlight" Lecture, Drexel University School of Public Health, Philadelphia, March 8, 2017.

Distinguished Burack Lecturer, University of Vermont, Burlington, January 26, 2017.

Keynote, One Health / EcoHealth Biennial Conference, Melbourne, December 6, 2016.

Banquet Keynote, *Climate Change and Emerging Infectious Diseases*, International Committee of the Red Cross & Universities of Geneva and Lausanne, Geneva, Switzerland, June 6, 2016.

Dean's Lecture, Seoul National University, Korea, May 30, 2016.

Keynote, Citizen's Climate Lobby, Washington, June 20, 2016.

Dean's Lecture, University of Pittsburg, March 15, 2016.

Dean's Lecture, University of Vermont, Burlington, January 25, 2016.

Keynote, Climate Summit of Physicians for Social Responsibility (PSR), Washington, September 20, 2015.

Primary Organizer, Ethiopian Climate Change Summit, Bahir Dar, Ethiopia, June 29-30, 2015.

Keynote and Semester Commencement Speaker, University of Geneva, Switzerland, Geneva, February 2015.

World Leaders Dialogue, IUCN World Parks Congress, Sidney Australia, November 16, 2014.

World Health Summit presentation on Health Co-Benefits of Climate Policy, Geneva, October 20, 2014.

Health Summit Meeting; parallel to UN Summit on Climate Change (Co-Coordinator/Speaker) New York City, September 22, 2014.

Keynote and Co-Chair, Multi-Nation African Academies of Science Meeting, Addis Ababa, November 13, 2013.

Plenary Speaker for the Dalai Lama event, Change your Mind, Change the World, Madison, May 14, 2013.

Keynote Lecture for the US National Academy of Sciences, Forum on Microbial Threats, Washington, September 25, 2013.

Distinguished Scientist Seminar, Woods Hole Marine Biological Laboratory, Woods Hole, MA, September 13, 2013.

Keynote Lecture for the Inaugural Meeting of the Ethiopian Academy of Sciences, Addis Ababa, June 20, 2013.

Keynote Lecture for Turning the Tide: Reclaiming Health by Restoring the Planet, Missoula, March 9, 2013.

Keynote and Awarded by the NGO Sustain Dane as one of their 2012 Bioneers; Keynote: *Will Climate Change be our Demise ... or our Salvation?* Madison, December 12, 2012.

The Alfred Evans Distinguished Lecture, University of Michigan, Ann Arbor, July 22, 2009.

Keynote, Society of Epidemiologic Research (SER), Anaheim, CA, June 24, 2009.

Keynote, 16th World Congress of Disaster and Emergency Medicine, Victoria, Vancouver, May 12, 2009.

Keynote Address, Pan American Health Organization (PAHO) and the Brazilian Ministry of Health, Belem, Brazil, September 30, 2008.

Keynote Address, DMID International Research in Infectious Diseases Meeting, NIAID (NIH), May 28, 2008.

Deans Lecture, University of California, Los Angeles (UCLA), October 17, 2007.

Keynote Address, *Climate Change and Health: Great Risks AND Opportunities*, Annual Meeting of the Association of State and Territorial Health Officials (ASTHO), St Louis, October 5, 2007.

Keynote Address, Health Effects Institute, Annual Conference, Chicago, April 15, 2007.

Deans Forum, University of Illinois at Chicago School of Public Health, April 2007.

The Frankel Symposium, UCLA School of Law, March 2, 2007.

Plenary Address, *Climate Change and Health*, National Council for Science and the Environment Conference, February 1, 2007.

Keynote Address, Expert Workshop on Climate Change, CDC National Center for Environmental Health/ATSDR, Atlanta, GA, January 25, 2007.

Distinguished Lecture, GLOBES Program, Department of Biological Sciences, Notre Dame, October 2006.

Keynote Address, *Global Threats: Facts and Artifacts*, Dutch Society of Tropical Medicine and International Health, June 2006.

Purdue Climate Change Research Center Distinguished Lecture, May 2006

Dean's Lectureship, University of Michigan, School of Natural Resources and the Environment, April 2006.

Keynote Public Address, Institute for Children's Environmental Health, Seattle, WA, March 2006.

Keynote Address, United Nations Conference on Climate Change, Health Canada special symposium, "Global Health Alert: Climate Change Risks, Strategies and Solutions," Montreal, December 2005.

Yi Fu Tuan Lecture, Department of Geography, University of Wisconsin-Madison, *Land Use, Climate Change and Health: A Geographic Perspective of Human Disease Emergence*, Madison, October 2005.

Keynote Address, Oregon Environmental Council, Healthy Environment Forum, Portland, January 2004.

Merck Distinguished Lecture in Infectious Diseases, London Health Sciences Center, London, Ontario, November 2003.

Groundwater Foundation Keynote Presentation, *Waterborne Diseases: Present Challenges, Future Risks*, Lincoln, Nebraska, November 2003.

Keynote Address, International Society for Environmental Epidemiology, 15th Annual Conference, Perth, September 2003.

Keynote Address, International Development Research Centre International (Canada), for the Conference on Ecosystem Approaches to Human Health, Montreal, May 2003.

Keynote Address, International Workshop on Climate and Health in Small Island States, WHO Western Pacific Region, Samoa, July 2000.

College of Sciences' Distinguished Visitor Seminar, Old Dominion University and Eastern Virginia Medical School, Norfolk, February 1999.

Keynote Address for NIEHS, NIAID, DOE, EPRI, NASA, Conference on Climate Change and Disease, Washington, September 1997.

Distinguished Lecture Series, *Climate Change, Health and Integrated Assessment*, Global Change Program, Carnegie Mellon, Pittsburgh, December 1996.

Mayor's Special Environmental Lecture and Tulane Center for Environmental Research Symposium, New Orleans, May 1996.

Invited Briefings

Congressional Testimony or Briefings to US Administration

American Meteorological Society Climate Briefing Series, Climate, Energy and Health Co-benefits, Washington, February 5, 2010.

Senate Hearing on Climate Change & Health; Committee on Education, Labor and Pensions (Senator Ted Kennedy) Washington, April 10, 2008.

House Hearing on Climate Change; Select Committee on Energy Independence and Global Warming (Representative Ed Markey) Washington, April 9, 2008.

Invited to Senate Hearing on Climate Change & Health, October 23, 2007 (schedule conflict and could not attend, so invited to submit written testimony instead).

Briefing to EPA Administrator Carol Browner, "Climate Change and Public Health Risks," February 19, 1997.

US Senate Roundtable Discussion on Findings of the IPCC Second Assessment Report, Chaired by Senator Lieberman (invited to present health impacts), Washington, June, 1996.

State Legislature Testimony or Briefings

Wisconsin, Governor's Bicycle Coordinating Council, March 13, 2013.

State of New Mexico, Environmental Improvement Board. Testimony on health and climate change Regulation, 20.2.350 NMAC – 8 *Greenhouse Gas Cap and Trade*, Santa Fe, September 21, 2010.

Wisconsin State Legislature, Public Service Commission & Industrial Energy Incentives. Presented health co-benefits research results at public hearing, January 27, 2010.

National Academy of Sciences (NAS) Presentations

NAS Workshop, "Expanding Biofuel Production and the Transition to Advanced Biofuels: Lessons from the Upper Midwest for Sustainability," invited panelist, St. Paul, MN, April 8, 2010.

Invited Presenter to the BASC study on Stabilization Targets for Atmospheric Greenhouse Gas Concentrations, September 16, 2009

Invited Discussant, Institute of Medicine (IOM) report, *Microbial Threats to Health: Factors in Emergence*, April 2002.

Invited Presenter (twice) to the National Research Committee (NRC) Panel on Climate, Ecology and Infectious Diseases, March 23, 1999, and again on April 10, 2000.

Special Invited Seminars

Weill Cornell Medicine, Global Health Education/Climate Change Series, January 20, 2021.

Wisconsin Academy of Sciences (via webinar), Preventing the Next Pandemic, September 23, 2020.

Compounding Crises: Climate, Coal, Pandemics and Public Health, Sierra Club (via webinar), May 20, 2020.

Sustainability after COVID-19: Can the Global Green New Deal Movement Survive the Pandemic? Future Earth, via webinar, May 12, 2020.

Crossroads of Ideas, Wisconsin Institute for Discovery, Madison, April 30, 2020.

Invited lecture, Aquarium of the Pacific's Aquatic Academy Spring 2020 Course, The Effects of Earth's Health on Human Health, Long Beach, CA, March 4, 2020.

Invited lecture for the University of Colorado, Anschutz Medical Campus, January 29, 2020.

Grand Rounds, UW-Madison Department of Family Medicine, January 22, 2020.

WHO Health Summit event at the UN Conference of the Parties (COP25) Madrid, December 7, 2019.

Closing Speaker, US Policy Brief for the Lancet Countdown Report, Washington, November 18, 2019.

Lecture for Cayetano School of Public Health, Lima, Peru, June 10, 2019.

Lecture for Geissen University, School of Medicine, Geissen, Germany, May 13, 2019.

Lecture for League of Women Voters, Green Bay, WI, May 8, 2019.

Public Lecture on Climate and Health, Baltimore Progressive Democrats, April 29, 2019.

Lecture, Tallying the Health Gains from Climate Change Solutions, Nelson Institute's Earth Day Conference, Madison, April 22, 2019.

WHO Health in All Policies - Urban Air Pollution Workshop, Washington, June 18, 2018.

Milwaukee Rotary, March 27, 2018.

Climate and Health, CSU School of Global Environmental Sustainability, Ft. Collins, October 2017.

Occupational Health and Climate Policies for Health (2 lectures), Bellin/Theda Care, Egg Harbor, WI, September 30, 2017.

Climate Change Update, Rotary Club of Sydney Cove, Sydney, September 23, 2017.

Climate Change Health Epidemiology, University of Sydney, School of Public Health, September 22, 2017.

Climate Change Policy and Health Opportunities, Rotary Club of Madison, July 12, 2017.

UN COP Preplanning meeting, Seminar, Rabat, Morocco, October 10, 2016.

Rotary International, Climate Change Health, Seoul, Korea, May, 31, 2016.

Live from Paris Climate Agreement Talks, Paris, December 10, 2015 via online audience in Madison.
<http://ghi.wisc.edu/live-from-paris-connecting-wisconsin-and-the-u-n-climate-talks-2/>

Moderator for Health Care without Harm, UN WHO summit, side meeting to the Climate Paris Agreement, Paris, December 4, 2015.

Science of Tap, UW-Madison, Minocqua, WI, October 7, 2015.

Gondar University Lecture on climate change, June 12, 2015, Gondar, Ethiopia.

UW Livable Cities Conference, Madison (presented remotely from Geneva), May 12, 2015.

Climate & Health, Horn of African, Regional Environmental Center, Addis Ababa, April 8, 2015.

Urban Health, Freiburg University, Freiburg, Germany, February 12, 2015.

International Health and Climate, Heidelberg University, Heidelberg, Germany, February 11, 2015.

Urban Health, International Council of Scientific Unions (ICSU), Xiamen, China, November 9, 2014.

Global Forum on Health Promotion, University of Geneva, November 12, 2014.

Climate Change Health, Lund University, Lund, Sweden September 25, 2014.

Climate and Infectious Diseases, European CDC, Stockholm, May 28, 2014.

Grand Rounds, St. Patrick Hospital, Missoula, March 9, 2013.

Selected by NIH to present our research findings to a combined NIH/CDC conference on "Climate Change and Public Health: Merging Research and Practice," Washington, January 31, 2013.

Australian National University, Tribute to Professor Tony McMichael, November 1, 2012.

Shanghai Centers for Disease Control and Prevention, October 24, 2012.

Fudan University, School of Public Health, Shanghai, October 22, 2012.

University of the Chinese Academy of Science, College of Resources and Environment, Beijing, October 21, 2012.

Addis Ababa University, special lecture in Health Sciences, Addis Ababa, October 12, 2012.

Harvard Department of Environmental Health's Colloquium, "Health Co-Benefits of Low-Carbon Transportation," Boston, April 5, 2012.

New Research on Climate Change and Health. Cleveland Museum of Natural History, November 16, 2011.

Climate Change Health Ethics and Interdependence, Presentation to His Holiness the Dalai Lama, Mind and Life Conference Series, Dharamsala, India, October 17-21, 2011.

Climate Change Ethics and Health, two presentations: (1) for Prime Minister and the public; (2) Teachers College of Bhutan, Paro, Bhutan, October 10 and 13, 2011.

Washington Global Health Alliance (WGHA) Discovery Series Lecture, *Health Risks and Benefits of Climate Change*, Seattle, January 4, 2011.

US National Assessment of Climate Change, Midwest Regional Assessment Workshop, "Update on Health Impacts for the Upper Midwest," Chicago, February 23, 2010.

Institute on the Environment, University of Minnesota, "Climate Change and Health: Foreboding Clouds and Silver Linings," April 9, 2010.

Wisconsin Academy of Sciences, Arts, and Letters, Heat Waves and High Water: Climate Change, the Wisconsin Landscape and Public Health in 2050, Madison, November 15, 2009.

Baltimore Friends School, *Climate Change and Health*, Baltimore, September 20, 2009.

Cornell University Climate Change Forum, "Climate Change and Health: Dark Shadows and Silver Linings," Ithaca, NY, April 30, 2009.

President's Circle of the National Academies of Sciences, Plenary speaker in session on "Sustainable Communities," Mountain Vies, CA, November 6, 2008.

Keynote Address, University of Hawaii, NSF IGERT meeting, Honolulu, Sept. 14, 2008.
NIEHS (NIH) Research Seminar Series, Research Triangle Park, April 18, 2008.

Keynote, Pan American Health Organization (PAHO), Climate Change and Health in the Amazon, Brasilia, April 9, 2008 (via teleconference link from PAHO HQ in Washington).

Research Seminar Series, Department of Epidemiology and Biostatistics, Case Western Reserve School of Medicine, Cleveland, April 1, 2008.

Climate Change and Health: Risks and Opportunities, UC Berkeley (public lecture), March 6, 2008.
Research Methods: Global Environmental Change, Department of Environmental Health, March 7, 2008.

Café Scientifique, Montana State University, Bozeman, MT, November 20, 2007.

Plenary Presentation to the Presidential Management Fellows, Washington, July 26-27, 2007.

The Heat is Rising: What you Need to Know about Climate Change and Public Health, Johns Hopkins Bloomberg School of Public Health, April 6, 2007.

"Emerging Disease Threats from Global Climate & Ecological change," Institute for Research and Development (IRD), Agro M, Montpellier-UW Madison Exchange, April 2, 2007, Montpellier, France.

Sauk County Institute of Leadership, Public Safety and Emergency Preparedness, Baraboo, WI, March 8, 2007.

Population Health Impacts of Damaged Environments, University of Wisconsin School of Business, Special Symposium on Environmental Risk Management, Madison, September 26, 2006.

Wingspread Meeting on Global Warming (invited participant), Racine, WI, June 6, 2006.

Global Ecological Change and Disease Emergence, UNESCO meeting on Sustainable Development and Biodiversity (meeting for French President Jacques Chirac), Paris, January 2005.

Gordon Research Conference, Lewiston, Maine (Invited), July 2004.

Columbia University's 250th Anniversary, Climate Symposium, Earth's Future: Taming the Climate, New York, April 2004.

The 3rd Isadore Bernstein Symposium, University of Michigan, Ann Arbor, March 2004.

Climate Change, El Niño and Health, (on special invitation by the Dean of the School of Public Health), University of Sydney, October 2003.

GIS and Remote Sensing Methods for Studying Land Use Change and Disease, Australian National University, Canberra, October 2003.

Case Studies: Climate, Land Use, Biodiversity and Health, National Symposium on Climate Change and Human Health, Australian National University, September 2003, Canberra.

Ecology of Infectious Diseases, Symposium on Environmental Change and Human Health 2003, University of North Carolina, Chapel Hill, April 2003.

Brainstorming Seminar with Al Gore, Harvard University, John F. Kennedy School of Government, Cambridge, MA, December 6, 2002.

Environment and Health Alliance, Penn State University, Hershey, March 2002.

Climate and Infectious Diseases in Latin America, International Research Institute on Climate Prediction (IRI), Columbia University, New York, January 2002.

Invited Presenter, Lessons Learned Workshop of the US National Assessment on Climate Change, EPA, Washington, November 2001.

Plenary Presentation, 1st International Workshop on Ecosystem Health, University of Western Ontario, London, Ontario, June 2001.

Climate Neutral Project Speaker Series, Oberlin College Environmental Studies Program, Oberlin, OH, May 2001.

Climate Change and Health, Weizman Institute Board Members Meeting, Washington, April 2001.

Health Research of Climate Variability—Review of past and ongoing studies for the Scientific Advisory Board of the Office of Global Programs, National Oceanic and Atmospheric Administration (NOAA), September 2000.

Climate, Ecological Change and Public Health: Two-part lecture series for the American Museum of Natural History, New York, Feb, 2000.

Hantavirus Risk and Climate/Ecological Variability, North Carolina Department of Public Health,

Greensboro, NC, February 2000.

Climate Change, El Niño and Human Health, Seminar Series of the Environmental and Occupational Health Institute, Rutgers/Robert Wood Johnson Medical School, Piscataway, January 2000.

Symposium on the Science of Global Climate Change, University of Iowa, Iowa City, March 1999.

National Research Council, Board on Atmospheric Sciences and Climate, Round table presentation for strategic planning of the National Assessment on Climate Change, Washington, June, 1998.

Climate & Health: The North American Perspective, European Centre for Environment and Health, WHO, Rome, May 1998.

Climate Change and Infectious Disease, Center of Global Hydrology and Geography, University of Alabama, Huntsville, November 1997.

Climate Change and Public Health: Overview and Research in Progress, Invitation by Dr. Richard Jackson, Director, National Center for Environmental Health, CDC, Atlanta, April 1997.

Global Change & the Americas, Earth Science Directorate, Goddard Space Flight Center, June 1996.

London School of Hygiene and Tropical Medicine, Department of Epidemiology Seminar, May 1996.

Emerging Diseases & Climate Change, Occupational Medicine Department Seminar, University of Maryland, February 1996.

Global Environmental Change and Public Health, American Society of Preventive Oncology, Washington, DC, March 1996.

Climate Change and Vector-borne Diseases, Vector Biology Forum, MMI, October 1995.

Scientific Meetings (Presentations, Sessions Presided, or Conferences Co-Chaired)

Plenary Speaker, National Academy of Medicine, 50th Anniversary Conference (via webinar), October 18, 2020.

Plenary Speaker, American Psychiatric Association Annual Conference, San Francisco, May 21, 2019.

Coordinator, Satellite Workshop in Planetary Health, Consortium of Universities for Global Health (CUGH), Chicago, March 7, 2019.

Plenary talk on Climate Change, Midwest Universities for Global Health (MUGH), St. Louis, December 7, 2018.

Climate Change Roundtable, American Public Health Association (APHA) Annual Conference, San Diego, November 11, 2018.

Urban Health Workshop, American Society of Tropical Medicine and Hygiene, New Orleans, October 28, 2018.

WHO, International Healthy Cities Conference, Plenary Panelist, Belfast, Ireland, October 3, 2018.

Planetary Health, 2nd Annual Conference, Edinburgh, May 30, 2018.

Consortium of Universities for Global Health, Organizer for two satellite sessions: (1) Climate Change and Global Health; (2) Urban Health, New York City, March 15, 2018.

Climate Change and International Health, American Public Health Association, Atlanta, November 8, 2017.

Occupational Health and Climate Change, International Commission on Occupational Health – Epidemiology Conference EPICOH, Edinburgh, August 29, 2017.

Climate and Infectious Diseases, IECID 2017 Impact on Environmental Change on Infectious Diseases, Trieste, Italy, May 18, 2017.

Consortium of Universities for Global Health, Urban Health satellite, Washington, March 2017.

Climate and One Health, One Health & EcoHealth Conference, Melbourne, December 2, 2016.

Climate and Cities, American Public Health Association (APHA), Denver, November 2, 2016.

Earth Day, Nelson Institute for Environmental Studies, Madison, April 25, 2016.

Consortium of Universities for Global Health, Perfect Storm? Zika Outbreak, San Francisco, April 11, 2016.

Health in the Built Environment, Urban Health Inaugural Meeting, International Council for Scientific Unions (ICSU) & UN University & the Inter-Academy Medical Panel (IAMP), 2014.

World Leaders Dialogue, International Union for the Conservation of Nature (IUCN) World Parks Congress, Sydney, Australia, November 16, 2014.

Consortium of Universities for Global Health, session on Climate Change and Health Co-benefits, Washington, March 15, 2013.

CBD-PAHO-WHO Regional Workshop on the Inter-Linkages between Human Health and Biodiversity in the Americas, Manaus, Brazil, September 4-6, 2012 (presented Opening Keynote via Skype).

Association of Public Health Laboratories, Climate Change and Public Health, Seattle, May 20, 2012.

Beyond GDP, Special conference of the United Nations (Session Presider), New York, April 2, 2012.

Health Co-Benefits from Low-Carbon Transportation, Planet Under Pressure Conference, London, January 28, 2012.

Environmental Security and Public Health breakout workshop, National Science and Environmental Policy Conference, Washington, DC, January 19, 2012.

World University Network, Scenario Planning Workshop, San Juan Island, September 8-9, 2011.

Presentation to the Joint Meeting of the International Joint Commission's Council of Great Lakes Research Managers and the Health Professionals Task Force, Milwaukee, July 25, 2011.

Presentation at National Center for Atmospheric Research (NCAR), Workshop on Climate and Health, Boulder, CO, July 11, 2011.

UNESCO International Conference on Desertification, *Climate Change, Water Management and Public Health: Considering the Dangerous Trade-offs*, Beer Sheva, Israel, November 9, 2010.

Macabi Health Services, *Climate Change and Health*, Tel Aviv, Israel, November 7, 2010.

International Association for Ecology and Health, Biannual Conference, *Transportation Health Co-benefits of Greenhouse Gas Mitigation*, London, August 17, 2010.

Climate Change Mitigation and Global Health Workshop, London School of Hygiene and Tropical Medicine, *Research Update of Transportation Air Pollution Simulation Modeling for the US Midwest*, London (via video link), March 17, 2010.

USGS, Health of Wisconsin Water Resources, Plenary Presentation, Madison, March 4, 2010.

USGCRP, Midwest Regional Assessment Workshop, *Climate Change & Health in the Midwest Region*, Chicago, February 23, 2010.

American Public Health Association (APHA) Annual Conference, *Climate Change Health Opportunities*, November 9, 2009.

CDC, National Center for Environmental Health Conference, *Climate Change & Water & Air Quality: Future Scenarios of Risks and Co-Benefits, Great Lakes Region*, October 27, 2009.

Pan American Health Organization (PAHO), Workshop on Climate Change, Disasters and Health, Havana, Cuba, October 15, 2009.

1st Congress on Health and Disasters in Cuba, Plenary Presentation, Havana, October 14, 2009.

International Society of Environmental Epidemiology (ISEE), *Health Co-benefits of Reduced Car Travel in the Midwest US*, Dublin, Ireland, August 26, 2009.

US EPA, Climate Change and Waterborne Disease Risk in the Great Lakes Region of the U.S, Chicago, July 14, 2009.

American Museum of Natural History, Exploring the Dynamic Relationship Between Health and the Environment, April 3, 2009.

International Association for Ecology and Health, *Health Co-Benefits of Energy Policy Options*, Merida, Mexico, December 2, 2008.

American Public Health Association, Annual Conference: (1) *Health Impact Assessment Roundtable*; and (2) *Research Strategies for Climate Change and Human Health*, San Diego, CA, October 27-29, 2008.

Climate Change and Health: A Looming Ethical Crisis, Global Environmental Integrity Group, Berlin, July 18, 2008.

Plenary Address, *Climate Change: Concerns and Opportunities for State Epidemiologists*, Annual Meeting of the Council of State and Territorial Epidemiologists, Denver, June 9, 2008.

Plenary Speaker, UW Health Integrative Medicine Conference, Madison, April 14, 2008.

Land Use and Biodiversity Change: Implications for Disease Resurgence, International Association for Landscape Ecology, Madison, April 7, 2008.

Keynote Presentation for the Asia-Pacific EcoHealth Conference, Melbourne, November 30, 2007.

APHA Plenary Keynote, Climate Change: A Challenge to Public Health, Washington November 6, 2007.

Wisconsin Environmental Health Association, sponsor for the National Environmental Health Association Region 4 Conference, *Climate Change and Health: Risks and Opportunities*, La Crosse, WI, September 26, 2007.

Plenary, International Society for Environmental Epidemiology, *Climate Change Health: Synergies between Climate and Land use Change*, Mexico City, September 7, 2007.

WHO/PAHO Regional Meeting, Climate Change and Health, San Jose, Costa Rica, August 6-7, 2007.

National Association of City and County Health Officers (NACCHO) Annual Conference, *Climate Change Health*, Columbus, OH, July 12, 2007.

NAS, Institute of Medicine, Forum on Microbial Threats, *Vector-borne Diseases--Understanding the Environmental, Human Health, and Ecological Connections*, Fort Collins, CO, June 20, 2007.

Consultative Group on Biological Diversity (CGBD) 2007 Annual Meeting, Invited discussion leader (for this closed meeting of environmental private foundations), Wintergreen, VA, June 14, 2007.

National Summit on Coping with Climate Change, University of Michigan, Ann Arbor, MI, May 8, 2007.

Physicians for Social Responsibility (PSR), Public Address – Madison Historical Society Lecture Hall, Madison, April, 2007.

European Centre for Disease Prevention and Control (ECDC), Plenary, *The Global Picture: Preparing for Change*, Stockholm, Sweden, March 30, 2007.

Institute for the Future, *Animal-Public Health Workshop*, Palo Alto, CA, February 28, 2007.

Climate Change Health Implications, International Conference of the CDC National Center for Environmental Health/ATSDR, Atlanta, GA, December 5, 2006.

Land Use Change and Disease, DIVERSITAS, ESSP, Beijing, China, November 10, 2006.

Inequities in Health Impacts of Global Climate Change, APHA Annual Conference, Boston, November 6, 2006.

Biodiversity, Ecosystem Processes and Human Health (invited speaker to this session), Ecological Society of America, Memphis, August 2006.

Tropical Deforestation, Vector Ecology and the Re-emergence of Malaria, American Society of Tropical Medicine and Hygiene, Washington, December 2005.

A Tale of Two Microbes: Urbanization, Deforestation and the Rise of Dengue and Malaria, Society of Conservation Biology, New York, August 2004.

Land Use and Human Welfare, American Geophysical Union (AGU) Chapman Conference on Ecosystem Interactions with Land Use Change, Santa Fe, June 2003.

Climate Change Health Impacts, Fifth State and Local Climate Change Partner's Conference, US EPA, Annapolis, November 2002.

Health Impacts of Climate Change, Health Effects Institute (HEI) & Pew Trust Conference on Climate Change Mitigation, MIT, Boston, August 2002.

Lyme Disease Under Projected Climate Change for the US and Canada, Energy Modeling Forum,

Snowmass, July 2002.

Colloquium Co-Chair and Project Leader, Unhealthy Landscapes: How Land Use Change Affects Health, Annual Conference of the International Society of Ecosystem Health, Washington, June 2002.

Climate Change and Health, State of the Environment Report, US EPA, Washington, May 10, 2002.

Findings from the US National Assessment, APHA, Atlanta, October 2001.

Nitrogen and Human Health, Annual Conference on Nitrogen, Potomac MD, October 2001.

Waterborne Disease Associated with Heavy Precipitation Events, International Society for Environmental Epidemiology, Garmisch-Parkenkirchen, Germany, September 2001.

Distinguishing between Epidemiology and Junk Science, Society of Epidemiologic Research, Annual Conference, Toronto, June 2001.

Emerging Diseases in the Urban Environment, New York Academy of Medicine, New York City, December 2000.

National Academy of Sciences, Forum on Science, Policy and the Environment (Discussant for session, "Global Environmental Change"), December 2000.

Findings of the Health Sector of the US National Assessment on Climate Variability and Change, APHA Annual Conference, Boston, November 2000.

Respiratory Diseases and Climate Change, NIEHS International Conference on Occupational and Environmental Respiratory Diseases, Lucknow, India, November 2000.

Recommendations of the Health Sector of the US National Assessment on Climate Variability and Change, Geological Society of America, Reno, November 2000.

Climate Change and Parasitic Infections, VIII European Multicolloquium of Parasitology, Poznan, Poland, September 2000.

Defying Nature's End, Center for Applied Biodiversity Science, Conservation International, Pasadena, August 2000.

Deforestation and Malaria: A Comparison of Malaria Risk in Deforested and Forested Sites in the Peruvian Amazon, Conservation Medicine Symposium, Conservation Biology Annual Conference, Missoula, June 2000.

Human Health Impacts of Climate Variability and Change in the US: Health Responses to Climate Variability and Change, AAAS, Washington, DC, February 2000.

Health Effects of Global Environmental Change, Human Health and the Environment in the Twenty-first Century, Western North Carolina Tomorrow, Asheville, January 2000.

Association of Extreme Rainfall and Water-borne Disease Outbreaks, Energy Modeling Forum, Snowmass, July 1999.

Session Co-Chair, Climate Change and Health, International Congress on Ecosystem Health, Davis, August 1999.

Mesoscale Climate Modeling of Air Pollution in Baltimore Under Climate Change Scenarios, Society of Epidemiological Research, Baltimore, June 1999.

Integrated Research Approaches to Climate Variability & Health Studies, US Geological Survey, Reston, March 1999.

Integrated Climate/Health Studies: Research in Progress, American Meteorological Society, Special Session on Climate and Health, Dallas, January 1999.

Co-presiding session with Dick Jackson (CDC), *Agricultural Waste and Water Quality*, APHA, Washington, November 1998.

Presiding session, *Climate Change, El Niño and Health: New Research Findings and Report from the Kyoto Protocol*, APHA, Washington, November 1998.

Co-presiding session, *The USGCRP National Assessment of Climate Variability and Change: Health Sectoral Assessment*, APHA, Washington, November 1998.

Satellite Remote Sensing Applications to Public Health, NASA Workshop on Interdecadal Climate Variability, Williamsburg, September 1998.

New findings from Research on Public Health Effects of Global Climate Change, Ecological Society of America, Baltimore, August 1998.

Climate Simulation Modeling Applied to Public Health, Energy Modeling Forum, Aspen, August 1998.

Climate Variability / Health Research Update, Community Meeting on Integrated Assessment, Association of American Geographers, Washington, July 1998.

Co-President with Rita Colwell (NSF), *Climate, Pathogens & Health*, American Society for Microbiology: 98th General Meeting, Atlanta, May 1998.

WHO/UNEP/MRC sponsored International Workshop on Climate Change Monitoring, *Monitoring for Vector-borne Diseases* (presentation and working paper), London, December 1997.

Climate Change, Health and Environmental Policy: Case Study of Air Pollution in China, APHA, Indianapolis, November 1997.

Presider for session on Global Climate Change and Vector-borne Diseases, Second International Congress on Vector Ecology, Orlando, October 1997.

White House Conference on Climate Change (invited participant), Luncheon meeting with Secretary of Health, Donna Shalala, October 1997.

Impacts of Climate Change, Science Summit on Climate Change, Union of Concerned Scientists, Washington, September 1997.

Chairman, Human Health Working Group, US EPA Regional Workshop on Climate Change Impacts in the Mid-Atlantic Region, Pennsylvania State University, September 1997.

US-Mexico-Canada Research Development Workshop on Emerging and Re-emerging Diseases in North America (under venue of the NAFTA), NIH, Bethesda, September 1997.

WHO/FAO/ IGBP (GCTE)/ IRI/ ICIPE, International Workshop on Global Change Impact Assessment Approaches for Vectors and Vector-borne Diseases, Nairobi, September 1997.

Public Health Repercussions of Climate and Ecological Change, Special Symposium: Technological Humans and Global Change, Ecological Society of America, Albuquerque, August 1997.

Co-chair, Special Colloquium on Global Climate Change and Infectious Disease, American

Academy of Microbiology, Montego Bay, June 1997.

Co-chair, Conference on Climate Change: Implications for Occupational and Environmental Health, Society of Occupational and Environmental Health, NIH, Bethesda, March 1997.

Global Climate Change and Pediatric Public Health (poster session), Children's Environmental Health Network, Conference on Children's Environmental Health, Washington, February 1997.

Climate Change and Public Health: Implications for Latin America, 10th Anniversary Conference, Angeles Hospital, Mexico City, December 1996.

Climate Change and Pediatric Diseases, Special Session on Emerging Environmental Health Issues in Children, APHA, New York, November 1996.

Presider and organizer, Climate Change and Emerging Infectious Diseases, APHA, November 1996.

Climate Change Impacts on Malaria and Dengue Fever: Analysis from Empiric Data and Mathematic Modeling, XIV International Scientific Meeting of the International Epidemiological Association, Nagoya, Japan, August 1996.

Climate Change and the Spread of Dengue Fever: Analysis from Model Simulations, Annual Conference of the Society of Ecosystem Health and Medicine, Copenhagen, August 1996.

Climate Change, Human Health and Sustainability, Air and Waste Management Annual Conference, Nashville, June 1996.

Climate Change & Sustainable Development, National Council on International Health, Washington, DC, June 1996.

Climate Change and the spread of dengue fever and malaria, 7th International Conference on Global Warming, Vienna, Austria, April 1996.

Global Climate Change: Implications for Sustainable Health and Development, Center for Environmental Information, Conference on Sustainable Development and Global Climate Change, Washington, DC, December 1995.

Global Climate Change: An Inter-generational Public Health Threat, APHA Special Session on Environment and Health: Revisiting the Linkages, San Diego, CA, November 1995.

Co-chair of session, Implications for Disease Prevention, Conference on Human Health and Global Climate Change, National Academy of Science and the National Science and Technology Council, Washington, DC, September 1995.

Health, Climate Change and Integrated Assessment, Energy Modelling Forum, Snowmass, CO, August 1995, 1996, 1997.

Health Adaptations to Climate Change: A Need for Farsighted Integrated Approaches, the International Conference on Climate Change Adaptation Assessments, US Country Studies Program, St. Petersburg, Russia, May 1995.

Health/Ecosystem Linkages in an Integrated Assessment of Climate Change Impacts, Southeast Regional Workshop: Vulnerable Resources and Predictive Capabilities, US EPA, Charleston, SC, April 1995.

African Regional Workshop on Climate Change and Health Vulnerabilities, US Country Studies Program, Harare, Zimbabwe, March 1995.

Climate Change and Infectious Diseases: Applications for Satellite Remote Sensing, American Society of Tropical Medicine and Hygiene, Cincinnati, OH, November 1994.

Presider and organizer for plenary session, Global Environmental Change and Public Health: New Challenges and New Approaches, APHA Annual Meeting, Washington, DC, October 1994.

International Research on Health and Climate Change: Findings from a new WHO Database, 5th International Conference on Global Warming, San Francisco, April 1994.

Environmental Health Education and Lead Poisoning, APHA Annual Meeting, San Francisco, CA, October 1993.

Presider and organizer, Health Effects of Global Climate Change, APHA Annual Meeting, San Francisco, CA, October 1993.

Environmental Teratogens, Family Medicine Grand Rounds, Medical University of South Carolina, Charleston, SC, February 1990.

Health Effects of Low-level Ionizing Radiation, Family Medicine Grand Rounds, Medical University of South Carolina, Charleston, SC, April 1990.

Biomarkers in Cancer-Strain Mice, Surgical Forum Conference, Atlanta, GA, October 1983.

Exposure Pathways of DDT in Peregrine Falcons, Department of Biology Special Seminar, Colorado College, Colorado Springs, CO, 1980.

ADDITIONAL INFORMATION

Personal Statement of Research and Training Objectives

The main objective of my research is to focus on population-wide, long-term global health risks associated with climate or ecological change, and the co-benefits from alternative energy and land use policies. These fall under the new framework of “Planetary Health”. I follow the Health Impact Assessments (HIA) approach to consider tradeoffs and equity issues for each risk analysis. Examples of my focus areas include: (1) Global climate change and a) infectious diseases (both vector- and water-borne); b) heat morbidity and mortality; and c) urban air pollution/climate/health modeling; (2) land use change (especially deforestation) and disease emergence; (3) the built urban environment and transportation planning effects on health; and (4) energy scenarios and air quality impacts on public health. The latter two (items 3 and 4) is where my research is expanding the most.

Because of the policy-relevance of these issues, I actively participate in national and international assessments related to global environmental problems. Examples include leadership roles for the United Nations Intergovernmental Panel on Climate Change, United Nations Millennium Ecosystem Assessment, and the US National Assessment on Climate Variability and Change. In 2006 I was elected President of the International Association for Ecology and Health, and served for two terms, stepping down in 2010. In 2019, I was elected into the National Academy of Medicine and has been asked to serve on committees related to climate change, low-carbon energy and health.

The integrated nature of global environmental problems requires collaboration with ecologists, climatologists, economists, mathematical modelers and a diversity of other public health experts. I believe that only through substantive interdisciplinary efforts can key insights be discovered pertaining to linkages between human health and ecological degradation. Such cross-collaboration is also necessary to conduct appropriate risk assessments in this field. Therefore, I’ve developed new classes related to Planetary Health. These are: ENTOM/ENVIR ST 205 “Our Planet Our Health,” and POP HLTH/ENVIR ST 739 “Climate Change and Planetary Health.”

Finally, I strive to integrate my research into teaching for students and communication to policy makers and the general public. Towards this goal, I led a multidisciplinary team in a successful application to the NSF IGERT program, and subsequent development of a new 12-credit Certificate in Humans and the Global Environment (CHANGE). In the Global Health Institute I’ve established and direct a new Planetary Health Scholars Program, and in collaboration with the School of Education designed a Planetary Health Workshop for K-12 Science and Social Studies teachers.

Keywords

Air Pollution	Remote Sensing
Built Environment	Simulation Modeling
Climate Change	Transportation
Climate Change Health Benefits (or co-benefits)	Urban Sprawl
Deforestation	Vector-borne Diseases
Dengue Fever	Water-borne Diseases
Energy	
Food Systems	
Global Climate Change	
Greenhouse Warming	
Family Medicine	
Health Impact Assessment	
Heat Mortality	
Landscape Immunity	
Land Use Change	
Malaria	
Occupational and Environmental Medicine	
Preventive Medicine	