

Zoë Chafe, MS, MPH

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Summary: Twelve years of interdisciplinary research, communication, and outreach experience in public health, climate change, air pollution, and energy use.

PROFESSIONAL EXPERIENCE

Intergovernmental Panel on Climate Change (IPCC), Stanford, CA *Feb 2012 – Oct 2014*

Chapter Scientist & Contributing Author, Human Health (Working Group II)

Researcher and project manager responsible for coordinating work among 20+ chapter authors; contributed research on “co-benefits” for health from climate change mitigation.

World Health Organization, Bonn, Germany

Nov 2012 – Dec 2014

Consultant

Lead author of a policy-oriented research review on “*Residential Heating with Wood and Coal: Health Impacts and Policy Options in Europe and North America*,” commissioned by the Convention on Long-Range Transboundary Air Pollution (LRTAP) Task Force on Health.

International Institute for Applied Systems Analysis, Laxenburg, Austria

Sep 2008 - Jun 2012

Lead Author & Consultant, Energy and Health

Managed research process, coordinated author contributions, and provided research support for *Global Energy Assessment* (2012) chapter on “Energy and Health.” Participated in *Young Scientists Summer Program*, with funding from US National Academy of Sciences.

Worldwatch Institute, Washington, DC

Jun 2003 – Jun 2008

Research Associate & Online Communications Manager

Authored research on carbon markets, climate change, disasters, and environmental governance, for *State of the World*, *Vital Signs*, and *World Watch* magazine. Managed institutional partnerships and website redesign. Served as liaison to donors. Wrote press materials. Gave live and recorded interviews for TV, radio, and print media.

EDUCATION

Ph.D. (expected 2015-2016) and M.S. (2010)

University of California, Berkeley (Energy and Resources Group)

- Dissertation topics: climate change, air pollution, and human health. Emphasis on environmental and health implications of household fuel use choices, particularly air pollution from heating and cooking with solid fuels. Dissertation committee: Kirk Smith (Chair), Daniel Kammen, John Balmes.
- Awarded National Science Foundation (NSF) Graduate Research Fellowship (2010-2014).
- Awarded Foreign Language and Area Studies Fellowship (2009 and 2010).
- Co-instructor of graduate-level course on climate change and human health (2013 and 2014).
- Founding director of UC Berkeley Climate Change and Health IdeaLab.

M.P.H. (2011)

University of California, Berkeley (School of Public Health, Interdisciplinary Program)

- Awarded University Fellowship for study of public health (2010).

B.A. (2003, Honors)

Stanford University (Program in Human Biology)

- Awarded Albert Hastorf Award for Outstanding Service to the Program in Human Biology.

LEADERSHIP & COMMUNITY BUILDING

- **Alameda County Community Choice Aggregation:** Steering Committee (Alternate Member) (2015-present)
- **UC Berkeley Climate Change and Health Idealab:** Founding Director (2013-2014)
- **American Geophysical Union (AGU):** Global Environmental Change Executive Committee Member (2011-2014)
- **UC Berkeley Center for Health Leadership Student Board:** Board Member (2010-2011)
- **UC Berkeley Energy and Resources Group (ERG) Executive Committee:** Student Representative (2009)
- **Berkeley Energy and Resources Collaborative (BERC):** Leadership Team (2008-2009)
- **SustainUS, US Youth Network for Sustainable Development:** US Steering Committee & DC Coordinator (2004-6)

ACADEMIC HONORS & AWARDS

- **National Science Foundation (NSF)** Graduate Research Fellowship (2010)
- **UC Berkeley School of Public Health:** University Fellowship (2010)
- **European Union Center of Excellence** Predissertation Research Fellowship (2009)
- **Foreign Language and Area Studies (FLAS)** Fellowship: Swahili (2009, 2010)
- **UC Berkeley Energy and Resources Group:** Departmental Block Grant Fellowship (2008, 2014)

PUBLICATIONS (SELECTED)

Chafe, Z., M. Brauer, M.E. Heroux, Z. Klimont, T. Lanki, R. Salonen, K.R. Smith, "Residential Heating with Wood and Coal: Health Impacts and Policy Options in Europe and North America" (**World Health Organization, Regional Office for Europe**: 2015).

Chafe, Z., M. Brauer, Z. Klimont, R. Van Dingenen, S. Mehta, S. Rao, K. Riahi, F. Dentener, K.R. Smith, "Household Cooking with Solid Fuels Contributes to Ambient PM_{2.5} Air Pollution and the Burden of Disease" (**Environmental Health Perspectives**: 2014).

Smith, K.R. et al. (including Z. Chafe). Human Health: Impacts, Adaptation, and Co-benefits. In Climate Change 2014: Impacts, Adaptation, and Vulnerability. Intergovernmental Panel on Climate Change Fifth Assessment Report. (**Cambridge University Press**: 2014).

Woodward, A., Smith, K.R., Campbell-Lendrum, D., Chadee, D.C., Honda, Y., Liu, Q., Olwoch, J., Revich, B., Sauerborn, R., Chafe, Z., Confalonieri, U., Haines, A. "Climate Change and Health: On the Latest IPCC Report" (**Lancet**: 2014).

Smith, K.R., Bruce, N., Balakrishnan, K., Adair-Rohani, H., Balmes, J., Chafe, Z., Dherani, M., Hosgood, H.D., Mehta, S., Pope, D., Rehfuess, E., et al. "Millions Dead: How Do We Know and What Does it Mean? Methods Used in the Comparative Risk Assessment of Household Air Pollution" (**Annual Review of Public Health**: 2014).

Balakrishnan, K., Chafe, Z., Kjellstrom, T., McKone, T.E., Smith, K.R. Energy Poverty and Public Health: Impacts from Solid Cookfuel. In Energy Poverty: Global Challenges and Local Solutions. Editors: Halff, A., Rozhon, J., Sovacool, B.K. (**Oxford University Press**: 2014).

Smith, K. R., H. Frumkin, K. Balakrishnan, C. Butler, Z. Chafe, I. Fairlie, P. Kinney, T. Kjellstrom, D. L. Mauzerall, T. McKone, A. McMichael and M. Schneider, "Energy and Human Health," (**Annual Review of Public Health**: 2013).

Lim, S. S., et al. (including Z. Chafe), "A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010," (**Lancet**: 2012).

Smith, K. R., K. Balakrishnan, C. Butler, Z. Chafe, I. Fairlie, P. Kinney, T. Kjellstrom, D. L. Mauzerall, T. McKone, A. McMichael and M. Schneider: Chapter 4 - Energy and Health. In Global Energy Assessment - Toward a Sustainable Future, Cambridge, UK and New York, NY, USA and the International Institute for Applied Systems Analysis, Laxenburg, Austria, pp. 255-324 (**Cambridge University Press**: 2012).

Jankowska, M., D. Lopez-Carr, C. Funk, G. Husak, Z. Chafe, "Climate Change and Human Health: Spatial Modeling of Temperature, Malnutrition, and Livelihoods in Mali, Africa," (**Applied Geography**: 2011).

Chafe, Z., S. Mehta, K.R. Smith, "Estimating the proportion of fine particulate ambient air pollution (PM_{2.5}) attributable to household fuel use for cooking in Asia," (**Proceedings of the 12th International Conference on Indoor Air Quality and Climate**: 2011).

Chafe, Z., "Use of Incentives for Behavior Change in Environmental Health Interventions: Lessons for Improved Cookstove Dissemination," Interdisciplinary MPH Project (2011).

Chafe, Z., and H. French, "Improving Carbon Markets," chapter in *State of the World 2008*, Worldwatch Institute (**Norton**: 2008).

Chafe, Z., "Consumer Demand for Quality in Ecotourism," chapter in *Quality Assurance and Certification in Ecotourism*, R. Black and A. Crabtree, eds., (**CABI**: September 2007).

Renner, M. and Z. Chafe, "Beyond Disasters: Creating Opportunities for Peace," Worldwatch Report 173, (**Worldwatch Institute**: 2007).

Chafe, Z., "Reducing Natural Disaster Risk in Cities," chapter in *State of the World 2007*, Worldwatch Institute, (**Norton**: 2007).

Renner, M. and Z. Chafe, "Turning Disasters into Peacemaking Opportunities," chapter in *State of the World 2006*, Worldwatch Institute, (**Norton**: 2006).

Chafe, Z., "Weather-related Disasters Affect Millions," "Disappearing Mangroves Leave Coasts at Risk," "Internet and Cell Phone Use Soars," "Air Travel Takes Off Again," articles in *Vital Signs 2006-2007*, Worldwatch Institute, (**Norton**: 2006).

Chafe, Z., "Travel and Tourism," "Don't Our Dollars Help?" "Flying Conscientiously," "Sizing Up Sustainable Tourism," articles in *Worldchanging: A User's Guide for the 21st Century*, A. Steffen, ed., (**Abrams**: 2006).

Chafe, Z., "Consumer Demand and Operator Support for Socially and Environmentally Responsible Tourism," edited by M. Honey (**Center on Ecotourism and Sustainable Development**: 2005).

PRESENTATIONS & PANELS (SELECTED)

The Renaissance International School: Guest Lecturer for 5th and 6th Grade, "Climate Change and Health," 28 May 2015. (Oakland, California)

World Health Organization, 17th meeting of the World Health Organization/Convention on Long-Range Transboundary Air Pollution Joint Task Force on Health: Presenter, "Residential Heating with Wood and Coal: Health Impacts and Policy Options," 15 May 2014. (Bonn, Germany)

Environment and Health 2013 (ISIAQ/ISEE/ISES): Presenter, "Contribution of Household Heating with Solid Fuels to Ambient Particulate Air Pollution (PM_{2.5})," 21 Aug 2013. (Basel, Switzerland)

UC Berkeley PH271G Course "Global Environmental Change for Health Scientists": Lecturer, "Household Fuel Choices, Health, and Climate," 21 March 2013. (Berkeley, California)

UC Berkeley ER290 Course "Climate Change Mitigation and Impacts": Guest Lecturer, "Why Climate Change Matters for Human Health," 19 February 2013. (Berkeley, California)

UC Berkeley ER200 Course "Energy and Society": Guest Lecturer, "Energy for the South: Biomass, Households and Gender," 30 August 2012. (Berkeley, California)

China Alliance for Clean Stoves/ Global Alliance for Clean Cookstoves Workshop on Ensuring the Benefits of Clean Cookstoves and Fuels through Research, Standards, and Evaluation: Presenter, "Household Fuel Use and Indoor/Outdoor Particulate Pollution in China," 10 July 2012. (Beijing, China)

8th International Conference on Air Quality: Presenter, "Fraction of Ambient Fine Particulate (PM_{2.5}) Air Pollution Attributable to Household Cooking with Solid Fuels in Asia," 23 March 2012. (Athens, Greece)

Center for Catastrophic Risk Management: Presenter, "Why Climate Change Matters for Health," 14 December 2011. (Berkeley, California)

American Geophysical Union Fall Meeting: Presenter, "Ambient Fine Particulate (PM_{2.5}) Air Pollution Attributable to Household Cooking Fuel in Asia," 9 December 2011. (San Francisco, California)

Climate Change: Population-Environment-Health Outcomes Symposium: Presenter, "Climate Change, Energy, and Health: Findings from the 2011 Global Energy Assessment," 6 October 2011. (Berkeley, California)

Peking University Workshop on Emissions, Transport, Exposure, and Health Effect of Fine Particles, Black Carbon, PAHs and Organo-phosphate Pesticides: Presenter and Panel Chair, "The Fraction of Fine Particulate Ambient Air Pollution (PM_{2.5}) Attributable to Household Fuel Use for Cooking in Asia," 30 August 2011. (Beijing, China)

The 12th International Conference on Indoor Air Quality and Climate: Presenter, "The Fraction of Fine Particulate Ambient Air Pollution (PM_{2.5}) Attributable to Household Fuel Use for Cooking in Asia," 8 June 2011. (Austin, Texas)

American Geophysical Union Fall Meeting: Poster presentation with Seth Shonkoff, "Inconsistencies in Black Carbon Literature," 15 December 2010. (San Francisco, California)

George Washington University: Guest lecturer for Environmental Policy course, "Carbon Markets and Carbon Trading," 6 February 2008. (Washington, DC)

World Bank Institute: Presenter, "Beyond Disasters: Creating Opportunities for Peace," 13 July 2007. (Washington, DC)

Woodrow Wilson Center, Environmental Change and Security Program: Presenter, "Beyond Disasters: Creating Opportunities for Peace," 28 June 2007. (Washington, DC)

United Nations Headquarters: Presenter, "From Disasters to Peacemaking: Disaster Relief, Sustainable Development, and Conflict Resolution," 12 June 2007. (New York)

US Institute of Peace: Symposium Speaker, "Global Peace and Security in Community Colleges and the Communities They Serve," 30 May 2007 and 12 July 2006. (Washington, DC)

UN-HABITAT: Speaker, "Launch of State of the World 2007," 17 April 2007. (Nairobi)

Japan Ministry of Foreign Affairs: Speaker, "Environment and Economic Development," 8 December 2006. (Tokyo)

World Urban Forum 3: Presenter, "Preview of State of the World 2007: An Urban Planet," 21 June 2006. (Vancouver)

American University: Panelist, "Sustainable Response to Natural Disasters: Perspectives from the Federal, Non-Governmental, and Local Levels," 25 April 2006. (Washington, DC)

University of Maryland, College Park: Guest Speaker, "Environmental Policy Roundtable: Turning Disasters into Peacemaking Opportunities," 3 March 2006. (College Park, MD)

UN Environment Programme (UNEP): Moderator and Speaker, "7th Global Civil Society Forum: Tourism and the Environment," 5 February 2006. (Dubai)