

Peter C. Frumhoff PhD
Curriculum Vitae

Address: 65 Pine Street, Belmont MA 02478

Email: pfrumhoff@woodwellclimate.org

Telephone: (c) +1 617 230-1651

SYNOPSIS

Peter C. Frumhoff is a leader at the nexus of climate science and public policy. He is the senior science policy advisor at the Woodwell Climate Research Center and teaches environmental science and public policy at Harvard University. A global change ecologist, he has published widely on the role of forests in climate mitigation, the climate responsibilities of fossil fuel companies, the scientific bases for climate litigation, the water demands of energy in a changing climate and the responsible governance of solar geoengineering research.

Through 2021, Frumhoff served as the longtime director of science and policy and chief climate scientist at the Union of Concerned Scientists (UCS), a leading science-based advocacy non-profit. There, he developed and led strategies and initiatives to bring robust climate science to bear on informing public understanding and motivating public policies; guided science, equity and innovation post-doctoral fellowships; and served as senior liaison with the scientific community, policymakers, funders and the media.

Dr Frumhoff is a Fellow of the American Association for the Advancement of Science and was the 2022 Richman Distinguished Fellow in Public Life at Brandeis University. He serves on the Climate Crossroads Advisory Committee at the National Academies of Science, Engineering and Medicine and was previously a member of the National Academies' Board on Atmospheric Sciences and Climate.

He was a lead author of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), which was awarded the Nobel Peace Prize in 2007, and lead author of the IPCC Special Report on Land Use, Land-use Change and Forestry. He has guided multiple regional climate impacts assessments, including the 2007 Northeast Climate Impacts Assessment.

Dr. Frumhoff co-founded and served on the Board of Directors of the American Wind Wildlife Institute. He has also served on the Advisory Committee on Climate Change and Natural Resource Science at the US Department of Interior, and the Board of Editors of *Ecological Applications* and *Elementa: Science of the Anthropocene*.

He was the 2014 Cox Visiting Professor in the School of Earth Sciences at Stanford University. Previously, he taught at the Fletcher School of Law and Diplomacy at Tufts University and the University of Maryland, and was an AAAS Science and Diplomacy Fellow at the US Agency for International Development. He received a PhD in ecology and MA in zoology from the University of California, Davis, and a BA in psychology *magna cum laude* from the University of California, San Diego.

PROFESSIONAL EXPERIENCE

- 2022 - **Lecturer on Environmental Science & Public Policy**, Harvard University
- 2022 - **Senior Science Policy Advisor**, Woodwell Climate Research Center
- 2022 **Richman Distinguished Fellow in Public Life**, Brandeis University
- 2007-2021 **Director of Science & Policy, Chief Climate Scientist**, Union of Concerned Scientists
- 2014 **Cox Visiting Professor**, School of Earth Sciences, Stanford University.
- 1996-2006 **Director and Senior Scientist** Global Environment Program, Union of Concerned Scientists
- 1998-2002 **Adjunct Professor** Fletcher School of Law and Diplomacy, Tufts University
- 1993-1996 **Research Scientist** Department of Zoology, Lecturer, School of Public Affairs, and Adjunct Assistant Professor, Program on Conservation Biology and Sustainable Development, University of Maryland
- 1991-1993 **Science and Diplomacy Fellow** American Association for the Advancement of Science & US Agency for International Development
- 1987-1991 **Research Associate** Museum of Comparative Zoology and Lecturer, Department of Anthropology, Harvard University
- 1993-1995 **Consultant** US Agency for International Development and USDA Forest Service.
- 1993-1995 **Tropical conservation policy course leader** The Organization for Tropical Studies, San Jose Costa Rica.
- 1992-1994 **Seminar leader**, Environmental Ethics and the Private Sector. The Aspen Institute.

PROFESSIONAL SERVICE, HONORS AND AFFILIATIONS

- 2023- *Member*, Climate Crossroads Advisory Committee, National Academies of Science, Engineering and Medicine
- 2022 *Elected Fellow*, American Association for the Advancement of Science
- 2022- *Affiliate Scholar*, Climate and Social Science Network
- 2022- *Member, Core Group on Climate Litigation Research*, British Institute of International and Comparative Law
- 2019-2021 *Member, Committee on Developing a Research Agenda and Research Governance Approaches for Climate Intervention Strategies that Reflect Sunlight to Cool Earth*, US National Academies of Sciences, Engineering and Medicine

2017 - 2023 *Member, Board on Atmospheric Sciences and Climate*, US National Academies of Science, Engineering and Medicine

2014- *Associate Editor, Sustainability Transitions* domain of *Elementa: Science of the Anthropocene*

2012 - 2019 *Member, Steering Committee, Center for Science and Democracy*, Union of Concerned Scientists

2008 - 2018 *Founding Member, Board of Directors*, American Wind Wildlife Institute

2012 – Present *Affiliate*, Harvard University Center for the Environment

2013 – 2017 *Member, Advisory Committee on Climate Change and Natural Resource Science*, U.S. Department of Interior

2012 – 2015 *Expert Advisory Panel Member*, Climate Change Vulnerability Assessment, City of Cambridge

2010 – 2013 *Chair, Scientific Advisory Committee*, Energy and Water in a Warming World Initiative, Union of Concerned Scientists

2010 - 2013 *Eco-Service Award Committee*, Ecological Society of America

2009 *International Advisory Group on Environmental Science and Policy* Rothschild Foundation

2005 - 2009 *Science Advisor*, Coalition for Rainforest Nations,

2005 - 2009 *Board of Editors, Ecological Applications*

2005 - 2007 *Steering Committee Chair*, Northeast Climate Impacts Assessment

2007 *Nobel Peace Prize*, Awarded to the Intergovernmental Panel on Climate Change

2000 – 2007 *Lead Author*, Intergovernmental Panel on Climate Change, Fourth Assessment Report and Special Report on Land-Use, Land-Use Change and Forestry

2001 - 2003 *Scientific Advisory Committee*, David H. Smith Research Conservation Research Fellowship Program

1999 – 2004 *Steering Committee*, Union of Concerned Scientists/Ecological Society of America Climate Change Impacts in the United States.

EDUCATION

Ph.D. Ecology, University of California, Davis

M.A. Zoology, University of California, Davis

B.A. Psychology, Biology - minor, University of California, San Diego, Phi Beta Kappa, *magna cum laude*

PUBLICATIONS

- Buma, B, P.C. Frumhoff et al. Assessing progress toward Paris Agreement temperature goals needs to account for rising emissions from warming ecosystems. *One Earth* in review. Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5165213
- Chapman, C.P. Fan, P.C. Frumhoff, C.A. Hemingway C.A. Peres, D. Sarkar and J.S. Serio Silva. How to translate knowledge to action at the needed scale. *Environmental Management*, in review.
- Wentz, J., D. Merner, B. Franta, A. Lehmen, A. & P.C. Frumhoff 2023. Research priorities for climate litigation. *Earth's Future*, 11 <https://doi.org/10.1029/2022EF002928>
- Elder, M, C. Phillips, P.C. Frumhoff, S. Potter and B.M Rogers 2022. The cost and benefits of fire management for carbon mitigation in Alaska. *Environmental Research Letters* 17 105001 doi.org/10.1088/1748-9326/ac8e85
- Phillips, C. B. Rogers, M. Elder, S. Cooperdock, M. Moubara, J.T. Randerson and P.C. Frumhoff. 2022. Escalating carbon emissions from North American boreal forest wildfires and the climate mitigation potential of boreal fire management. *Science Advances* 8 doi.org/10.1126/sciadv.abl7161
- National Academies of Sciences, Engineering, and Medicine 2021. Reflecting Sunlight: Recommendations for Solar Geoengineering Research and Research Governance. Washington, DC: The National Academies Press. doi.org/10.17226/25762. *Member, consensus study committee*
- Licker, R., B. Ekwurzel, S C Doney, S R Cooley, I D Lima, R Heede and P C Frumhoff, 2019. Attributing ocean acidification to major carbon producers. *Environmental Research Letters* 14 doi.org/10.1088/1748-9326/ab5abc
- Lo, Y.T.E., D. Mitchell, A. Gasparri, A.M. Vicedo-Cabrera, K. L. Ebi, P.C. Frumhoff, R. J. Millar, W. Roberts, F. Sera, S. Sparrow, P. Uhe and G. Williams 2019 Increasing mitigation ambition to meet the Paris Agreement's temperature goal avoids substantial heat-related mortality in U.S. cities. *Science Advances* 5 (6) doi.org/10.1126/sciadv.aau4373
- Stephens, J.C., Frumhoff, P.C. and Yona, L., 2018. The role of college and university faculty in the fossil fuel divestment movement. *Elementa: Science of the Anthropocene*, 6(1), p.41 <http://doi.org/10.1525/elementa.297>
- Frumhoff, P.C. and J.C. Stephens 2018. Towards legitimacy of the solar geoengineering research enterprise. *Phil. Trans. R. Soc. A* **376**:20160459. doi.org/10.1098/rsta.2016.0459.
- Goldman, G.T., K. Mulvey, P.C. Frumhoff, R. Sethi, S. Pferman, and H. Com Moss. 2017. A methodology for assessment of corporate responsibility on climate change: A case study of the fossil energy industry. *Journal of Environmental Investing* 8:160-181.
- Ekwurzel B., J. Boneham, M. W. Dalton, R. Heede, M.R. Allen, and P. C. Frumhoff. 2017 The rise in atmospheric CO₂, surface temperature and sea level from emissions traced to major carbon producers. *Climatic Change* 144:579–590 doi.org/10.1007/s10584-017-1978-0.
- Frumhoff, P.C. and J.C. Stephens 2017 The siren call of US funding for solar geoengineering research. pp 28-31 in Burns, E., DW Keith, E. Parson, and G. Wagner, eds. Report on the Forum on U.S. Solar Geoengineering Research Washington, D.C March 24, 2017. Available [here](#).

- Frumhoff, P.C. and J.C. Stephens 2017. Commentary on 'Toward a Responsible Solar Geoengineering Research Program'. *Issues in Science and Technology* 33, no. 4 (Summer 2017) Available [here](#).
- Mitchell, D., C. Heaviside, S. Vardoulakis, C. Huntingford, G. Masato, B. Guillod, P. Frumhoff, A. Bowery, D. Wallom and M. Allen. 2016 Attributing human mortality during extreme heat waves to anthropogenic climate change. *Environmental Research Letters* 11 doi10.1088/1748-9326/11/7/074006
- Frumhoff, P. C., R. Heede and N. Oreskes 2015. The climate responsibilities of major industrial carbon producers. *Climatic Change* 132:157-171 doi: 10.1007/s10584-015-1472-5
- Frumhoff, P.C., V. Burkett, R.B. Jackson, R. Newmark, J. Overpeck, and M. Webber. 2015. Vulnerabilities and opportunities at the nexus of electricity, water and climate. *Environmental Research Letters* 10 published online. doi:10.1088/1748-9326/10/8/080201.
- Rosenberg, A.R, L. Branscomb, V. Eady, P.C. Frumhoff, G.T. Goldman, M. Halpern, K. Kimmell, Y. Kothari, L.D. Kramer, N.F. Lane, J.J. McCarthy, P. Phartiyal, K. Rest, R. Sims, C. Wexler. 2015. Congress's attacks on science-based rules. *Science*:348: 964-966. doi: 10.1126/science.aab2939
- Frumhoff, P.C. 2014. Climate deadlock. *Issues in Science and Technology* 31:5
- Allison, T.D., T.L. Root and P.C. Frumhoff. 2014. Thinking globally and siting locally: renewable energy and biodiversity in a rapidly warming world. *Climatic Change* doi10.1007/s10584-014-1127-y
- Sanford, T. P.C. Frumhoff, A. Luers and J. Gullledge 2014. The climate policy narrative for a dangerously warming world. *Nature Climate Change* 4:164-166. doi.org/10.1038/nclimate2148
- V. Burkett, P.C. Frumhoff, M. Webber, R. Newmark, R. Jackson and J. Overpeck. Guest Editors 2013 *Environmental Research Letters Special Issue on Electricity Production, Water Resources and Climate Change*.
- Ekwurzel, B. P C. Frumhoff and J. McCarthy. 2011. Climate uncertainties and their discontents: Increasing the impact of assessments on public understanding of climate risks and choices *Climatic Change* 108: 791-802
- Meyer, J.L, P.C. Frumhoff, S.P. Hamburg and C. de la Rosa. 2010 Above the din but in the fray: environmental scientists as effective advocates. *Frontiers in Ecology and the Environment* 8: 299-305
- Grainger, A., D.H. Boucher, P.C. Frumhoff, W.F. Laurance, T. Lovejoy, J. McNeely, M. Neikisch, P. Raven, N.S. Sodhi, O. Venter and S.L. Pimm. Biodiversity and REDD at Copenhagen. 2009 *Current Biology*, 19: 974-976
- Frumhoff, P.C., C. Wake, J. McCarthy, J. Melillo, S. Moser, D. Wuebbles, 2008. An integrated climate change assessment for the Northeast United States. *Mitigation and Adaptation Strategies for Global Change* 13: 419-423.
- Wake, C., P.C. Frumhoff, J. Melillo, J. McCarthy, S. Moser, D. Wuebbles. 2008 Guest Editors. *Mitigation and Adaptation Strategies for Global Change* 13: 419-659. *Special Issue on Climate Change Impacts and Solutions Mitigation and Adaptation in the Northeast United States*.
- Gullison, R.E., P.C. Frumhoff, J.G. Canadell, C.B. Field, D.C. Nepstad, K. Hayhoe, R. Avissar, L.M. Curran, P. Friedlingstein, C.D. Jones, C. Nobre. 2007. Tropical forests and climate policy. *Science*: 316:985-986.
- Skutsch, M. N. Bird, E. Trines, M. Dutschke, P. Frumhoff, B. de Jong, P. van Laake, O. Masera and D. Murdiyarso 2007. Clearing the way for reducing emissions from tropical deforestation. *Environmental Science and Policy* 10:322-334

- Schlamadinger, B, N. Bird, T. Johns, S. Brown, J. Canadell, L. Ciccarese, M. Dutschke, J. Fiedler, A. Fischlin, P. Fearnside, C. Forner, A. Freibauer, P. Frumhoff, N. Hoehne, M. Kirschbaum, A. Labat, G. Marland, A. Michaelowa, L. Montanarella, P. Moutinho, D. Murdiyarso, N. Pena, K. Pigoud, Z. Rakonczay, E. Rametsteiner, J. Rock, M. J. Sanz, U. Schneider, A. Shvidenko, M. Skutsch, P. Smith, Z. Somogyi, E. Trines, M. Ward, Y. Yamagata, 2007. Options for including LULUCF activities in a post-2012 international climate agreement. *Environmental Science and Policy* 10: 295-305
- Nabuurs, G.J., O. Masera, K. Andrasko, P. Benitez-Ponce, R. Boer, M. Dutschke, E. Elsiddig, J. Ford-Robertson, P. Frumhoff, T. Karjalainen, O. Krankina, W.A. Kurz, M. Matsumoto, W. Oyhantcabal, N.H. Ravindranath, M.J. Sanz Sanchez, X. Zhang, 2007: Forestry. In *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, UK and New York, NY, USA.
- Hayhoe, K., P. Frumhoff, S. Schneider, A. Luers and C. Field. 2005. Regional assessment of climate impacts on California under alternative emissions scenarios: Implications for stabilisation. pp 227-234 in H.J. Schellnhuber et al, eds. *Avoiding Dangerous Climate Change*. Cambridge University Press, Cambridge UK and New York, NY, USA.
- Hayhoe, K, D. Cayan, C.B. Field, P.C. Frumhoff, E.P. Maurer, N. Miller, S.C. Moser, S. H. Schneider, K. Cahill, E.E. Cleland, L. Dale, R. Drapek, R.M. Hanemann, , L.S. Kalkstein, J. Lenihan, C.K. Lunch, R.P. Neilson, S. C. Sheridan and J.H. Verville. 2004. Emissions pathways, climate change and impacts on California. *Proceedings of the National Academy of Sciences* 101: 12422-12427
- Marland, G., R.A., Pielke Sr., M. Apps, R. Avissar, R.A. Betts, K.J. Davis, P.C. Frumhoff, S.T. Jackson, L. Joyce, P. Kauppi, J. Katzenberger, K.G. MacDicken, R. Neilson, J.O. Niles, D.S. Niyogi, R.J. Norby, N. Pena, N. Sampson, and Y. Xue. 2003. The climatic impacts of land surface change and carbon management, and the implications for climate-change mitigation policy. *Climate Policy* 3:149-157.
- Nielsen, E., P.C. Frumhoff, M. Manion, and J.J. Hardner, 2002. Designing a carbon market that protects forests in developing countries. *Phil. Trans. R. Soc. Lond. A* 360:1875-1888. Republished in I. Swingland, ed. 2003. *Capturing Carbon and Conserving Biodiversity*, Earthscan Press, London, UK.
- Frumhoff, P.C. and E.C. Losos. 2001. Where should natural forest management be promoted to conserve wildlife? pp. 453-472 in R. Fimbel, A. Grajal, and J.G. Robinson, eds. *The Cutting Edge: Conserving Wildlife in Logged Tropical Forests*. Columbia University Press, New York.
- Rice, R.E., C. Sugai, R.E. Gullison, P.C. Frumhoff, and E.C. Losos. 2001. Options for conserving biodiversity in the context of logging in tropical forests. pp. 168-179 in I. A. Bowles and G.T. Prickett, eds. *Footprints in the Jungle: Natural Resource Industries, Infrastructure and Biodiversity Conservation*. Oxford University Press, Oxford, UK.
- Noble, I., M. Apps, R. Houghton, D. Lashof, W. Makundi, D. Murdiyarso, B. Murray, W. Sombroek, R. Valenti, M. Amano, P. Fearnside, J. Frangi, P. Frumhoff, D. Goldberg, N. Higuchi, A. Janetos, M. Kirschbaum, R. Lasco, G.H. Nabuurs, R. Persson, W. Schlesinger, A. Shvidenko, D. Skole, P. Smith. 2000. Implications of different definitions and generic issues. pp. 53-126 in: R. Watson et al., eds. *Land-Use, Land-Use Change and Forestry: A Special Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge, UK.
- Brown, S., O. Masera, J. Sathaye, K. Andrasko, P. Brown, P. Frumhoff, R. Lasco, G. Leach, P. Moura-Costa, S. Mwakifwamba, G. Phillips, P. Read, P. Sudha, R. Tipper. 2000. Project-based activities. pp. 283-338 in: R. Watson et al., eds. *Land-Use, Land-Use Change and*

Forestry: A Special Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, UK.

- Hardner, J.J. P.C. Frumhoff and D.C. Goetze. 2000. Prospects for mitigating carbon, conserving biodiversity and promoting socioeconomic development through the Clean Development Mechanism. *Mitigation and Adaptation Strategies for Global Change* 5:61-80. (Special Issue on Land-Use, Land-Use Change and Forestry in the Kyoto Protocol)
- Frumhoff, P.C. 1998. The elusive prospect of sustainable forestry (Book review). *Trends in Ecology and Evolution* 13: 166-167.
- Bassow, S.L., and P.C. Frumhoff. 1997. The greenhouse challenge. *Defenders* 72: 54-56.
- Frumhoff, P.C. 1995. Conserving wildlife in tropical forests managed for timber. *BioScience* 45: 456-464.
- Frumhoff, P.C., and H.K. Reeve. 1994. Using phylogenies to test hypotheses of adaptation: a critique of some current proposals. *Evolution* 48: 172-180.
- Frumhoff, P.C., and P.S. Ward. 1992. Individual-level selection, colony-level selection, and the association between polygyny and worker monomorphism in ants. *American Naturalist* 39:559-590.
- Frumhoff, P.C. 1991. The effects of the cordovan marker on apparent kin discrimination within honey bee colonies. *Animal Behaviour* 42:854-856.
- Phelan, J.P., and P.C. Frumhoff. 1991. Differences in the effects of parental age on offspring life-history between tropical and temperate milkweed bug populations. *Evolutionary Ecology* 5:160-172.
- Carlin, N.F., and P.C. Frumhoff. 1990. Nepotism in the honey bee. *Nature* 346:706-707.
- Frumhoff, P.C., and J. Baker. 1988. A genetic component to division of labour in honeybees. *Nature* 333:358-361.
- Waldman, B., P.C. Frumhoff, and P.W. Sherman. 1988. Problems in kin recognition. *Trends in Ecology and Evolution* 3:8-13.
- Frumhoff, P.C., and S. Schneider. 1987. The social consequences of honeybee polyandry: the effects of kinship on worker interactions within colonies. *Animal Behaviour* 35:255-262.
- Dingle, H., and P.C. Frumhoff. 1984. Behavioral ecology. *McGraw-Hill Scientific Encyclopedia*, New York.
- Frumhoff, P.C. 1983. Aberrant songs of humpback whales: clues to the structure of humpback song. pp. 81-127 in R.S. Payne, ed. *Communication and Behavior of Whales*. Westview Press, Boulder, CO.

Major Technical Reports

- Merner, D. B. Franta, P.C. Frumhoff. 2022. *Identifying Gaps in Climate-litigation-relevant Research: An Assessment from Interviews with Legal Scholars and Practitioners*. Climate and Social Science Network Working Paper. April. 2022. Available [here](#).
- Phillips, C.A., B.M. Rogers, M. Elder and P.C. Frumhoff 2022. *Limiting carbon emissions from North American boreal forests*. Cambridge, MA: Union of Concerned Scientists. Available [here](#).

- Talati, S. and P.C. Frumhoff 2020. *Strengthening Public Input on Solar Geoengineering Research: What's Needed for Decision-making on Atmospheric Experiments*. Cambridge, MA: Union of Concerned Scientists. Available [here](#).
- Rogers, J. K. Averyt, S. Clemmer, M. Davis, F. Flores-Lopez, P. Frumhoff, D. Kenney, J. Macknick, N. Madden, J. Meldrum, J. Overpeck, S. Sattler, E. Spanger-Siegfried, and D. Yates. 2013. *Water-smart power: Strengthening the U.S. Electricity System in a Warming World*. Cambridge, MA: Union of Concerned Scientists. Available [here](#).
- Skaggs R, KA Hibbard, P Frumhoff, T Lowry, R Middleton, R Pate, VC Tidwell, JG Arnold, K Averyt, AC Janetos, RC Izaurrealde, JS Rice, and SK Rose. 2012. *Climate and Energy-Water-Land System Interactions Technical Report to the U.S. Department of Energy in Support of the National Climate Assessment*. PNNL-21185, Pacific Northwest National Laboratory, Richland, WA.
- Pulliam, H.R, D. Blockstein, P. Bridgewater, P.C. Frumhoff and B. Gold. 2009 *Linking Science to Environmental Policymaking in Israel*. Yad Hanadiv and the Israeli Society of Ecology and Environmental Sciences (ISEES). 45p.
- Luers, A, M. Mastrandea, K. Hayhoe and P.C. Frumhoff. 2007 *How to Avoid Dangerous Climate Change: A Target for U.S. Emissions Reductions* Union of Concerned Scientists, Cambridge, MA. Available [here](#).
- Frumhoff, P.C. J.J. McCarthy, J.M. Melillo, S.C. Moser, and D.J. Wuebbles. 2007. *Confronting Climate Change in the U.S. Northeast: Science, Impacts and Solutions*. Synthesis Report of the Northeast Climate Impacts Assessment (NECIA) Cambridge, MA: Union of Concerned Scientists. Available [here](#).
- Frumhoff, P.C., and E. C. Losos. 1998. *Setting Priorities for Conserving Biodiversity in Tropical Timber Production Forests*. Union of Concerned Scientists, Cambridge, Massachusetts and the Center for Tropical Forest Science, Smithsonian Institution, Washington DC.
- Frumhoff, P.C., D.C. Goetze, and J.J. Hardner. 1998. *Linking Solutions to Climate Change and Biodiversity Loss through the Kyoto Protocol's Clean Development Mechanism*. Union of Concerned Scientists, Cambridge, Massachusetts.
- Frumhoff, P.C. 1995. *Monitoring the Ecological Impact of USAID-Funded Projects to Conserve Biodiversity*. US Agency for International Development, Washington DC and the Environment and Natural Resource Information Center, Arlington VA. 20p.

Op-Eds and Blogs

How Stopping Alaskan Wildfires Can Slow Climate Change: Scientific American, October 4 2022 (with Carly Phillips and Brendan Rogers)

Peter C Frumhoff blog posts on *The Equation* (UCS blog site) 2011-2021 [Available here](#)

Fossil fuel companies claim they're helping fight climate change. The reality is different. Bulletin of the Atomic Scientists December 17, 2019 (with Kathy Mulvey and Myles Allen). Available [here](#)

Urgent climate action could prevent many heat-related deaths. Scientific American. June 4, 2019 (with Kristie L Ebi). Available [here](#)

Should oil companies pay for climate change? Yes, there is evidence. San Francisco Chronicle. March 21, 2018 Available [here](#)

Big oil must pay for climate change. Now we can calculate how much. The Guardian. September 7, 2017 (with Myles Allen). [Available here](#)

Fossil fuel firms are still bankrolling climate denial lobby groups. The Guardian. March 25, 2015. (with Naomi Oreskes) [Available here](#).

Making water-smart energy choices in Colorado. Denver Post. Oct 15, 2012 (with Alice Madden). [Available here](#).

Toward one America on climate change. Multiple newspapers – McClatchy syndicate. February 23, 2012 (with Andrew Hoffman). [Available here](#).

Candidates must deal with facts, not wishes, on climate change. Multiple newspapers – McClatchy syndicate. September 16, 2011 (with Kerry Emanuel). [Available here](#).

The limits of doubt-mongering. The Hill. February 23, 2011 (with Naomi Oreskes). [Available here](#).

Putting wind to work. Planning Magazine October 2008 (with Adam Davis and John Rogers).

TESTIMONY, LECTURES, SYMPOSIA, WORKSHOPS AND COURSES

Congressional Testimony

Panel on Adaptation, Hearing on Clean Energy Jobs & American Power Act (S1733) Senate Environment and Public Works (October 2009)

Hearing on Improved Federal Climate Research and Information Program, Senate Committee on Commerce, Science and Transportation (November, 2007).

Hearing on Climate Change Impacts, Senate Committee on Commerce, Science and Transportation., Full Committee Hearing on Climate Change Impacts (September 2004)

Invited Lectures, Symposia and Workshops (Selected)

Climate Science in the Courts, Climate Crossroads Summit, National Academies of Sciences, Engineering and Medicine, Washington DC (July 2024).

Opportunities to Reduce Wildfire Greenhouse Gas Emissions in Boreal Forests. Presentation at workshop on Greenhouse Gas Emissions from Wildland Fires: Towards Improved Monitoring, National Academies of Sciences, Engineering and Medicine, Washington DC (September 2023)

What if Someone Tries to Engineer the Climate? SXSW Conference Panel, Austin Tx (March 2023)

A Priest and a Climate Scientist Walk into a Webinar. American Meteorological Society Webinar on Faith and Science (February 2023)

Accounting for Emissions from Thawing Permafrost and Expanding Boreal Wildfires COP 27 Side Event, Sharm El-Sheik Egypt (November 2022)

Emerging Issues at the Nexus of Science and Climate Litigation. Asia-Europe Foundation Seminar on Climate Change and Human Rights (November 2022)

Recent Advances at the Science-Climate Litigation Nexus. Committee on Science, Technology and Law, US National Academies of Science, Engineering and Medicine. (March 2022)

From Science to Action on Climate Change. Richman Distinguished Fellowship Lecture, Brandeis University (March 2022).

Framing a Research Agenda for Climate Litigation. American Geophysical Union Annual Meeting Town Hall (December 2021)

Public Participation in Solar Geoengineering Research. Climate Engineering in Context Conference Workshop. (October 2021)

Solar Geoengineering Research: Dangerous Distraction or Idea Whose Time Has Come? Distinguished Scientist Seminar Series, Marine Biological Laboratory Woods Hole, MA (October 2021)

Solar Geoengineering Research: Dangerous Distraction or Idea Whose Time Has Come? Weston Distinguished Lecture Series, Center for Sustainability in the Global Environment. University of Wisconsin, Madison (September 2021)

Making Change with a Climate Change Expert. University of Cincinnati Science Policy Ambassadors. (September 2021)

Setting an Agenda for Solar Geoengineering Research and Governance. Wilson Center, Washington DC (May 2021)

Climate Science in the Courtroom: How Scientists Can Inform Climate Litigation and the Law American Geophysical Union Annual Meeting Town Hall (December 2020)

Science, Climate Litigation and the Law webinar series. Columbia Law School, the Climate Science Legal Defense Fund and the Union of Concerned Scientists (Fall 2020)

A Burning Question: Are Oil and Gas Companies Really Evolving? Boston Area Sustainability Group, Boston MA (October 2020).

Northern Forests at Risk Woods Hole Research Center, Woods Hole MA (July 2020).

Confronting Hard Choices on Solar Geoengineering. Philanthropies Roundtable on Solar Geoengineering (June 2020).

Confronting Hard Choices on Solar Geoengineering. Colorado State University, Fort Collins CO (May 2020).

From Science to Action on Climate Change. University of Illinois, Champaign-Urbana.

From Science to Action. Societal Engagement in Climate and Space Science Workshop, University of Michigan, Ann Arbor. (March 2020)

The Climate Responsibilities of Fossil Fuel and Tech Companies. Google, Mountain View, CA (February 2020)

From Science to Action on Climate Change. University of Alaska Fairbanks (October 2019)

Managing Boreal Wildfires for Climate Mitigation. Alaska Fall Fire Review, Fairbanks, AK. With Carly Phillips, Brendan Rogers and Molly Elder. (October 2019)

The Climate Responsibilities of Fossil Fuel Companies. Hampshire College (April 2019)

Climate Science and Policy: A Call to Action, Belmont MA (March 2019)

Hard Choices on Solar Geoengineering Research. Woods Hole Research Center, Woods Hole MA (February 2019)

The Science of Climate Responsibility. Environmental Law Alliance Worldwide (ELAW) Biennial Conference, Eugene OR (February 2019)

The Climate Responsibilities of Fossil Fuel Companies in a Carbon-Constrained World. Wesleyan University, Middletown CT (November 2018)

The Contribution of Emissions Traced to Major Carbon Producers to Climate Change. Philippines Human Rights Commission Hearing, Quezon City, Philippines. March 2018)

The Climate Responsibilities of Fossil Fuel Companies. University of California Los Angeles Law School, Los Angeles CA (January 2018)

Can Fossil Fuel Companies Be Held Liable for Climate Change? Columbia Law School, New York City, NY (October 2017)

The Climate Responsibilities of Fossil Fuel Companies, Brandeis University, Waltham MA (April 2017)

Who is Responsible for Climate Change? Conference on World Affairs, University of Colorado, Boulder CO (April 2017)

On the Acceptability of Funding From Fossil Energy Companies American Geophysical Union Fall Meeting, San Francisco, CA (December 2016)

Civil Society and Climate Accountability in the Wake of the Paris Agreement. Keble College, University of Oxford, Oxford UK (September 2016)

Scientific Perspectives on Potential State Causes of Action Against Major Carbon Producers, Harvard Law School, Cambridge, MA (March 2016)

Building Climate Accountability, Department of Global Ecology, Carnegie Institute of Science, Stanford CA (January 2014)

Crossing the 2014 Climate Divide: Scientists, Skeptics and the Media, Kennedy School of Government, Harvard University, Cambridge MA (February 2014)

Climate Science, Public Understanding and Public Policy. Library of Congress, Washington DC. (October 2012)

Public Understanding of Climate Risks and Choices in a Distracted Age. Dartmouth College, Hanover NH (May 2012)

The Role of Scientists in Shaping the American Response to Climate Change Harvard University, Cambridge MA (January 2012)

Above the Din but in the Fray: Bringing Science to Bear on Public Policy in a Distracted Age Cary Institute Conference on Effective Communication of Science in Environmental Controversies, Millbrook, NY (May 2009)

Tropical Forests and U.S. Climate Policy. National Conference on Science, Policy and the Environment. Washington DC (December 2008)

Confronting Climate Change in Cape Cod and New England Community Climate/Energy Caucus, Cape Cod Community College, West Barnstable, MA (June 2008).

Climate Change in New England and the Northeast ICLEI Municipal Adaptation Workshop, Boston MA (May 2008).

Reducing Emissions from Deforestation and Degradation (REDD): Current Proposals and the UNFCCC. Climate Change and Forest Peoples Workshop, Manaus Brazil (April 2008).

Confronting Climate Change in the United States: Science, Political Will and Public Policy. Heller School for Social Policy and Management, Brandeis University, Waltham, MA (March 2008).

Confronting Climate Change in New York and the Northeast . New York State Energy Research and Development Authority (NYSERDA) 2007 EMEP Conference, Albany, NY (November 2007).

Meeting the Climate Challenge: Risks and Opportunities for Land Trusts and Conservation. Land Trust Leadership Meeting on Climate Change, Denver CO (October, 2007).

REDD and Avoiding Dangerous Climate Change: Science and Policy Options for the US. Kathryn Fuller Science for Nature Symposium on Reducing Emissions from Deforestation, WWF Washington DC (October, 2007).

Emissions Pathways, Climate Change and Impacts on California. West Coast Governor's Global Warming Initiative Meeting, Seattle, WA (June, 2004)

Integrated Regional Climate Impacts Assessments: Lessons Learned and New Analyses for California First Annual Climate Change Conference, California Energy Commission, Sacramento, CA (June, 2004):

Scientific Integrity in Policymaking Woods Hole Research Center Woods Hole, MA (April, 2004)

Strengthening the Links Between Science and Conservation Policy. Symposium on *Life as a Conservationist: collective experiences of Harvard alumni*, Harvard University, Cambridge, MA (October, 2003).

Strengthening the Links Between Climate Change Science and Policy Board Meeting of The Energy Foundation, Chicago, IL (June, 2003).

The Strategic Communication of Scientific Consensus. Workshop on Research Priorities in Tropical Biology and Conservation, Association for Tropical Biology annual meeting, Panama City, Panama (July, 2002).

Retirement Benefits for Working Forests, Conference on Working Forests in the Tropics, University of Florida, Gainesville, FL, (February, 2002).

Land-Use, Land-Use Change and Forestry Projects in the Clean Development Mechanism." Meeting of the Environment Ministers of the Americas, Montreal, Canada, (March, 2001) .

The Environmental Effects of Human Ascendancy." STAR Graduate Fellowship Conference, Environmental Protection Agency, Washington DC, (July, 2000).

Policy Priorities for Large-scale Commercial Logging in High Extinction-risk Ecoregions CEO's Ad-hoc Forum on Forests, The World Bank, Washington DC (November, 1999).

Implications of the Kyoto Protocol for Tropical Forests. Meeting of the Ministers of Environment and Forestry of the Amazon Basin on the Clean Development Mechanism, Cochabamba, Bolivia (June, 1999):

Linking Solutions to Climate Change and Biodiversity Loss Symposium on Climate Change and Biodiversity, American Museum of Natural History, New York, NY (May, 1999): "Linking Solutions to Climate Change and Biodiversity Loss."

Science and Democracy in America: Roots, Tensions and Paths Forward. AAAS Annual Meeting, Boston, MA (February 2013)

The Anthropocene: Confronting the Prospects of a 4 C World. AGU Annual Meeting, San Francisco, CA (December 2012)

Electricity. Water and Climate. AGU Annual Meeting, San Francisco, CA (December 2012) (co-led with Robin Newmark and Kristen Averyt)

Climate Accountability, Public Opinion and Legal Strategies Workshop. Scripps Institute of Oceanography, La Jolla California (June 2012) (co-led with Naomi Oreskes)

Increasing Public Understanding of Climate Risks and Choices: Lessons from Social Science Research and Practice University of Michigan School of Business Ann Arbor, MI (February 2012) (co-led with Andrew Hoffman).

Biofuels, Tropical Deforestation and Climate Policy. AAAS Annual Meeting, Chicago, IL (February 2009).

Sustainable Development Implications of Land-Use, Land-Use Change and Forestry Measures in the Kyoto Protocol 12th Session of the Subsidiary Body for Scientific and Technological Advice, Bonn, Germany (June, 2000) (co-led with Christiana Figueres).

Climate Change and California Ecosystems. Annual Meeting of the Ecological Society of America, Snowbird, UT (August, 2000).

Strategies for Retiring Timber Concessions in Tropical Forests. Smithsonian Center for Tropical Forest Science, Washington DC, (June, 2000).

Land-Use, Land-Use Change and Forestry in the Clean Development Mechanism: Issues, Risks and Opportunities 12th Session of the Subsidiary Body for Scientific and Technological Advice, Bonn, Germany (June, 2000)

Forests in the Climate Change Agenda, IUCN Global Biodiversity Forum, Buenos Aires, Argentina (November, 1998).

The Future of US Foreign Assistance, American Association for the Advancement of Science, Washington, DC (1992).

US-Soviet Cooperation in Tropical Conservation. Harvard University, Cambridge, MA (1988).

Courses Taught (Selected)

Climate Responsibility and Climate Action (2022-2024) Harvard University

Biodiversity Science and Policy (1998-2002) Fletcher School of Law and Diplomacy, Tufts University