

James C. Arnott, PhD

Executive Director

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Bio

Dr. James Arnott is the Executive Director of the Aspen Global Change Institute. James has more than a decade of experience working on climate change mitigation and adaptation with a focus on connecting scientific knowledge with decision-making. At AGCI, James guides the Institute's programming and administration, which includes interdisciplinary research, policy advisory, and science education initiatives. In addition, James conducts original research on science policy and sustainability science with a focus on how collaborative research methods can increase the production of actionable science. In 2017, James co-founded the Mountain West Climate Services Partnership to help expand access to tools and services for adaptation to climate change in the Mountain West region. In 2011, James received the McCloy Fellowship in Environmental Policy from the American Council on Germany. James received a PhD in Environment & Sustainability from the University of Michigan and a Bachelor's degree in Political Science and Economics from Principia College.

Education

Principia College	Elsah, IL	Political Science & Economics	BA	2009
University of Michigan	Ann Arbor, MI	Sustainability & Environment	PhD	2019

Professional Appointments

Aspen Global Change Institute, Executive Director and other roles, 2008 – present

University of Michigan, Graduate Student Research Assistant, 2014 – 2019

Flux Farm Foundation, Research Associate, 2009 – 2010

Publications (peer reviewed)

Arnott, J. C., Kirchhoff, C. J., Meyer, R. M., Meadow, A. M., & Bednarek, A. T. (2020, in press). Sponsoring actionable science: What public science funders can do to advance sustainability and the social contract for science. *Current Opinion in Environmental Sustainability*.

Mach, K. J., Lemos, M. C., Meadow, A. M., Wyborn, C., Klenk, N. L., **Arnott, J. C.**, ... Wong-Parodi, G. (2020, in press). Actionable knowledge and the art of engagement. *Current Opinion in Environmental Sustainability*.

Jagannathan, K., **Arnott, J. C.**, Wyborn, C., Klenk, N., Mach, K. J., Moss, R. H., & Sjoström, K. D. (2020). Great expectations? Reconciling the aspiration, outcome, and possibility of coproduction. *Current Opinion in Environmental Sustainability*, 42. <https://doi.org/10.1016/j.cosust.2019.11.010>

Arnott, J.C., Neuenfeldt, R.J., Lemos, M.C., 2020. Co-producing science for sustainability: Can funding change knowledge use? *Glob. Environ. Chang.* 60, 101979. <https://doi.org/10.1016/j.gloenvcha.2019.101979>

Lemos, M. C., Wolske, K. S., Rasmussen, L. V., **Arnott, J. C.**, Kalcic, M. M., & Kirchhoff, C. J. (2019). The closer, the better? Untangling scientist-practitioner engagement, interaction, and knowledge use. *Weather, Climate, and Society*, (12 April 2019). <https://doi.org/10.1175/WCAS-D-18-0075.1>

Osenga, E. C., **Arnott, J. C.**, Endsley, K. A., & Katzenberger, J. W. (2019). Bioclimatic and soil moisture monitoring across elevation in a mountain watershed: Opportunities for research and resource management. *Water Resources Research*, 1–11. <https://doi.org/10.1029/2018wr023653>

Moser, S., Meerow, S., **Arnott, J. C.**, & Jack-Scott, E. (2019). The turbulent world of resilience: Interpretations and themes for transdisciplinary dialogue. *Climatic Change*, 153(1–2), 21–40. <https://doi.org/10.1007/s10584-018-2358-0>

Linkov, I., Fox-Lent, C., Read, L., Allen, C. R., **Arnott, J. C.**, Bellini, E., ... Woods, D. (2018). Tiered approach to resilience assessment. *Risk Analysis*, 38(9), 1772–1780. <https://doi.org/10.1111/risa.12991>

Arnott, J. C., Moser, S. C., & Goodrich, K. A. (2016). Evaluation that counts: A review of climate change adaptation indicators & metrics using lessons from effective evaluation and science-practice interaction. *Environmental Science and Policy*, 66, 383–392. <https://doi.org/10.1016/j.envsci.2016.06.017>

Arnott, J. C., Osenga, E. C., Cundiff, J. L., & Katzenberger, J. W. (2015). Engaging stakeholders on forest health: A model for integrating climatic, ecological, and societal indicators at the watershed scale. *Journal of Forestry*, 113(5), 447–453.

Moss, R. H., Meehl, G. A., Lemos, M. C., Smith, J. B., Arnold, J., **Arnott, J. C.**, ... Wilbanks, T. J. (2013). Hell and high water: Practice-relevant adaptation science. *Science*, 342(6159), 696–698. <https://doi.org/10.1126/science.1239569>

Williams, M. M., & **Arnott, J. C.** (2010). A comparison of variable economic costs associated with two proposed biochar application methods. *Annals of Environmental Science*, 4, 23–30. Retrieved from <http://hdl.handle.net/2047/d20000350>

Commentary & Opinion

Trueblood, D., Almazán-Casali, S., **Arnott, J. C.**, Brass, M., Lemos, M. C., Matso, K., ... Wondolleck, J. (2019). Advancing knowledge for use in coastal and estuarine management: Competitive research in the National Estuarine Research Reserve System. *Coastal Management*, 0(0), 1–10. <https://doi.org/10.1080/08920753.2019.1598221>

Lemos, M. C., **Arnott, J. C.**, Ardoin, N. M., Baja, K., Bednarek, A. T., Dewulf, A., ... Wyborn, C. (2018). To co-produce or not to co-produce. *Nature Sustainability*, 1(12), 722–724. <https://doi.org/10.1038/s41893-018-0191-0>

Ultee, L., **Arnott, J. C.**, Bassis, J., & Lemos, M. C. (2018). From ice sheets to main streets: Intermediaries connect climate scientists to coastal adaptation. *Earth's Future*, 6(3), 299–304. <https://doi.org/10.1002/2018EF000827>

Logan, T & **J.C. Arnott**. 2017. You've got the power. *Nature* 551(531). <https://www.nature.com/articles/d41586-017-07261-1>

Rockström, J., Brasseur, G., Hoskins, B., Lucht, W., Schellnhuber, J., Nakicenovic, N., ... **Arnott, J. C.** (2015). Climate change: The necessary, the possible and the desirable Earth League climate statement on the implications for climate policy from the 5th IPCC Assessment. *Earth's Future*, 2, 606–611. <https://doi.org/10.1002/2014EF000280>.Received

Reports

Pendergrass, A., Zelikova, J. **Arnott, J. C.**, Bain, H., Barnes, R., Baron, J, Dutt, K., ... Thompson, L. (2019). Inclusive scientific meetings: Where to start. Aspen Global Change Institute & 500 Women Scientists. <https://500womenscientists.org/inclusive-scientific-meetings>

Arnott, J.C., Katzenberger, J., & Osenga, E. (2014). Climate change & Aspen: An assessment to support stakeholder engagement and resiliency planning. A report by the Aspen Global Change Institute prepared for the City of Aspen. December, 2014. https://www.agci.org/sites/default/files/pdfs/lib/publications/GI_canary_ClimateChangeAspen2014.pdf

Jäger, Jill, S. Moser, **Arnott, J.C.**, & Schaller, M. (2014). Adaptation to climate change in mountain and coastal areas: A transatlantic Dialogue. Workshop report co-published by AGCI and the Climate Service Center. November, 2014. <https://www.agci.org/lib/13s3/adaptation-climate-change-mountain-and-coastal-areas>

Pilewskie, P., H. Singer, C. Jackman, L. Gray, J. Katzenberger, & **J.C. Arnott**. (2011). Aspen Global Change Institute Workshop on Global Change and the Solar Terrestrial Environment. NASA. *The Earth Observer* 23, Issue 1: Jan-Feb, 2011.

Arnott, J.C. (2012) 'Science as a contact sport': A look at the science-policy interface in Germany. A report to the American Council on Germany. January, 2012.

Arnott, J.C. (2011). Life-cycle assessment of carbon dioxide emissions and energy consumption resulting from proposed methods of woody biomass energy production in the Roaring Fork Valley. A report prepared for the Roaring Fork Biomass Consortium. September, 2011

Activities & Service

- California Strategic Growth Council, Climate Change Research Program Advisory Committee, 2020 -
- Review Editor, *Frontiers in Climate*, 2019 -
- Mountain West Climate Services Partnership, Co-Founder, 2017 -
- Michigan University-wide Sustainability & Environment (MUSE) Initiative, Co-Founder
- American Society for Adaptation Professionals, 2018 - Now
- Rackham Interdisciplinary Workshop on Sustainability, Co-chair, 2015 – 2017
- Doctoral Organizing Committee, Sch. of Nat. Res. & Env., Member, 2014 – 2016
- Climate Services Partnership, Member, 2012 – Now
- American Geophysical Union, Member, 2010 – Now
- Roaring Fork Climate Alliance, Advisor, 2010 – Now
- Aspen Institute Great Decisions Program, Moderator, 2012 & 2014
- Aspen Community Foundation Spring Board, Treasurer, 2011 – 2012
- Aspen Public Radio Advisory Board, Member, 2011 – 2012
- Community Office for Resource Efficiency Grant Review Committee, Member, 2011 – 2012
- Future Forest Roundtable (Member), White River National Forest, 2010 – 12

Presentations to Organizations & Groups (trainings, seminars, & webinars)

U.S. National Oceanic & Atmospheric Administration Climate Program Office, *Funding usable science for sustainability*, March 13, 2019, Silver Spring, MD

University of Michigan Science, Technology, and Society, *The environment crisis and the science crisis*, Feb 25, 2019, Ann Arbor, MI

National Estuarine Research Reserve System Science Collaborative, *What usable science means and how it can be achieved*, Jan 23, 2019, via webinar for Collaborative Science in Estuaries

Agenzia per la Promozione della Ricerca Europea [Agency for the Promotion of European Research], *Driving knowledge use for sustainability: science funding and knowledge co-production*, November 5, 2018, Rome, Italy

Katchemak Bay National Estuarine Research Reserve, *Identifying and tracking indicators of adaptation progress and effectiveness*, April 21, 2017

American Society for Adaptation Professionals, *Evaluation that counts: Successful adaptation indicators & metrics*, March 15, 2017, via webinar for Projects & Evaluations Affinity Group

Katchemak Bay National Estuarine Research Reserve, *Climate-resilient pathways: Turning points & decision points*, October 5, 2016, Homer AK

Berkeley National Lab Climate & Ecosystem Sciences Division, *Resilience in the face of global change*, April 1, 2016, Berkeley, CA

Jacques Cousteau National Estuarine Research Reserve, *How do we measure successful adaptation? Exploring metrics and indicators of success* [with Susanne Moser], June 23, 2016 Tuckerton, NJ

Hudson River National Estuarine Research Reserve, *How do we measure successful adaptation? Exploring metrics and indicators of success* [with Susanne Moser], September 29, 2015, Tomkins Cove, NY

Tijuana River National Estuarine Research Reserve, *How do we measure successful adaptation? Exploring metrics and indicators of success* [with Susanne Moser], Aug 27, 2015, Imperial, California

Wells National Estuarine Research Reserve, *Tracking progress and measuring adaptation success* [with Susanne Moser], June 22, 2015, Wells, Maine

Urban Sustainability Directors Network, *Searching for successful adaptation indicators & metrics* [with Steve Adams], May 15, 2015, St. Louis, Missouri

City of Aspen City Council, *Climate change & Aspen: An update on impacts to guide resiliency planning and stakeholder engagement*, December 2, 2014, Aspen, CO

Conference Presentations

Funding actionable science for sustainability, National Council for Science and Environment, Washington, DC, January 2020 [Oral]

Science + Society = Innovation? [with Christine Kirchhoff, Julie Vano, & Ellie Barber], American Geophysical Union, San Francisco, CA, December 2019 [Oral, Invited]

Funding actionable global change research, American Geophysical Union, San Francisco, CA, December 2019 [Oral]

Driving knowledge use for sustainability: Lessons from NERRS-funded research, National Estuarine Research Reserve System Annual Meeting, Charleston, SC, November 2019 [Poster]

Mountain West Climate Services Partnership, National Adaptation Forum, Madison, WI, April 2019 [Oral]

Evaluating #ScienceToAction amid changes to research funding and co-production, American Geophysical Union Fall Meeting, Washington D.C., December 2018 [Poster]

The influence of science funding agencies in fostering the co-creation of knowledge for use, Society for the Social Study of Science, Sydney, Australia, September 2018 [Oral]

Narrowing the knowledge-action gap for infrastructure: The role of science policy [with Christine Kirchhoff], Workshop on Government Decision-making to Allocate Scientific Resources. National Academy of Sciences, Washington, DC, January 2018. [Oral]
http://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga_184066.pdf

The influence of science funding agencies in support of effective decision-maker scientist partnerships, American Geophysical Union Fall Meeting. New Orleans, LA. December 2017. [Poster]

Drivers of knowledge use: Learning how NERES has generated usable science & technology, Annual Meeting of the National Estuarine Research Reserve System. Corpus Christi, TX. November 2017. [Oral]

'What they think': Perspectives of stakeholders contributing to the co-production of climate change impact modeling [with Christine Kirchhoff], American Geophysical Union Fall Meeting. San Francisco, CA. December 2016. [Oral + Poster]

Evaluation that counts: Successful adaptation indicators and metrics [with Susanne Moser], National Academy of Sciences, Board on Environmental Change and Society. Washington, DC. December 2016. [Invited oral]

Resilience: Boundary object, sham, or progress at the interface of science and practice? [with Susanne Moser], American Association of Geographers Annual Meeting. San Francisco, CA. April 2016. [Oral]

Making sense of risk and resilience in the face of global change [with Susanne Moser], Social Coast Forum. Charleston, SC. February 2016. [Oral]

Co-production of science for regional integrated assessment and management of climate change impacts: The case study of Aspen, CO [with John Katzenberger], American Geophysical Union Fall Meeting. San Francisco, CA. December 2015. [Oral]

The rugged path to effective decision support: Insight from users, practice, and theory in mountain and coastal areas, 4th International Climate Services Conference. Montevideo, UY. December 2014. [Oral]

The Earth Academy [with Guy Brasseur], 4th International Climate Services Conference. Montevideo, UY. December 2014. [Oral]

Science research questions for the anthropocene: How did we get here? Where are we going? How do we proceed? Aspen Global Change Institute. Aspen, CO. August 2014. [Oral]

Designing a Forest Health Index for the Roaring Fork Valley [with Elise Osenga, Jamie Cundiff, and John Katzenberger], American Geophysical Union Fall Meeting. San Francisco, CA. December 2013. [Poster]

A comparative approach for advancing strategies to inform regional response to climate change [with Guy Brasseur, Jill Jäger, John Katzenberger, Grit Martinez, Susi Moser, Michael K. Orbach, and Michaela Schaller], American Geophysical Union Fall Meeting. San Francisco, CA. December 2013. [Poster]

Enhancing decision support for climate adaptation at sub-regional to local scales through collaborative and interdisciplinary global change research and application [with John Katzenberger], American Geophysical Union Fall Meeting. San Francisco, CA. December 2012. [Poster]

From the Horse's Mouth: Engaging geoscientists on science [with John Katzenberger and Cherilynn Morrow], American Geophysical Union Fall Meeting. San Francisco, CA. December 2011. [Poster]

Challenges and Opportunities for Biochar as Carbon Sequestration Regime [with Morgan Williams], American Geophysical Union Fall Meeting. San Francisco, CA. December 2010. [Poster]

Grants

American Geophysical Union, “Illustrating innovations at the boundary of Earth science and society,” \$10,000, PI, 2019.

U.S. Department of Energy, “Interdisciplinary workshop on the impacts of land use and land management on Earth system evolution, biogeochemical cycles, extremes, and inter-sectoral dynamics” (DE-SC0020207), \$105,000, PI, 2019-2020.

National Oceanic & Atmospheric Administration, “Expanding water sector climate preparedness in the Intermountain West through network-based learning” (NA18OAR4310259), \$99,442, Co-PI, 2018-2019.

International Institute, University of Michigan (travel grant to conduct research), \$6,300, 2018.

Horace H. Rackham School of Graduate Studies, University of Michigan (travel grant to present research findings), \$~4,200, 2014-2018

U.S. Department of Energy, “2018 interdisciplinary science workshop on ‘When the rain stops: Drought on subseasonal timescales and longer’ ” (DE-SC0019428), PI, \$26,866, 2018-2019.

Heising-Simons Foundation, “Interdisciplinary science sessions on global change” (2018-0847), Director, \$158,521, 2018-2019.

National Science Foundation, “Science Policy Research Report: Institutional innovation to close the infrastructure knowledge-action gap” (1735848), Co-I. \$34,019, 2017-2018.

Heising-Simons Foundation, “Interdisciplinary science sessions on global change” (2017-317), Co-director, \$158,779, 2017-2018.

National Aeronautic & Space Administration, “Interdisciplinary summer science sessions” (NNX17A123G), Co-PI, ~\$154,000 per year, 2017-2019.

National Oceanic & Atmospheric Administration, “Expanding the science-policy interface to confront global change” (NA16OAR4310249), PI, \$20,000.

Kresge Foundation, “Risk and resilience in the face of global change,” Co-director (with Susanne Moser), \$75,000, 2015-2016.

U.S. Department of Energy Office of Science, “Impact relevance and usability of high resolution climate models and datasets” (DE-SC0014115), PI, \$80,000, 2015-2016.

U.S. Department of Energy Office of Science, “Experimental design for CMIP6: Aerosol, Land Use, & Future Scenarios” (DE-SC0012321), PI, \$84,266, 2014-2015

NASA, “Interdisciplinary summer science sessions” (NNX14AK68G), Program Director, ~\$145,000 per year, 2014-2017.

Print & Radio Media Appearances

- “Climate Report: Temperatures Rising in Aspen.” *Aspen Public Radio*, 6 Jan. 2015
- “The Forest Scoreboard.” *5280 Magazine*, December 2014
- “CrossCurrents Interview with James Arnott.” *Aspen Public Radio*, 28 August 2013
- “Local Consortium Fired Up About Biomass.” *Aspen Times*, 27 September 2011
- “Study Finds Biomass Heating Project Viable for the Valley.” *Aspen Daily News*, 27 September 2011

Public Speaking

- *Preparing for a changing west: Community, resilience, & hope*, Rotary Club of Evergreen, CO, September 14, 2019
- *Usability & possibility*, Headlands Center for the Arts, 2 September 2016.
- *What the [Bleep] is the Anthropocene?* Ann Arbor Nerd Nite, LIVE, 20 Nov 2014

Teaching

Graduate Student Instructor [with Professor Michaela Zint], Environ 211: Social Science & Environmental Problems, University of Michigan, Fall 2017.

Undergraduate Advisor, Undergraduate Research Opportunities Program (UROP), Winter 2017 (supervised one undergraduate student for a semester-long project).

Guest Lecturer, Environ 211: Social Science & Environmental Problems, University of Michigan, November 28 2016.

Guest Lecturer, NRE 555: Climate and Development, University of Michigan, February 24 2016.

Conference & Workshop Organization

Co-chair. Advancing the science of science to action. E-lightening session. American Geophysical Union, December 2019.

Co-chair. Beyond Partnerships: Creating, Scaling, and Sustaining Regional and Sector-Based Networks to Foster Coproduction in Support of Climate Change Adaptation. American Geophysical Union, December 2018.

Co-chair. Advancing the Science of Knowledge-use: Mechanisms, Applications, Gaps. National Socio-Environmental Synthesis Center (SESYNC). Ongoing August 2017 - 2019

Chair. Michigan University-wide Sustainability & Environment (MUSE) Conference. February 2017: Ann Arbor, Michigan.

Co-chair. Climate Change in Mountain and Coastal Areas: A Transatlantic Dialogue. Climate Service Center and Aspen Global Change Institute. April 2013: Hamburg, Germany; August 2013: Aspen, Colorado.

Convener. 2nd Annual Science Advisory Meeting to Inform a *Forest Health Index* and Bioclimatic Monitoring Network for the Roaring Fork Valley. National Center for Atmospheric Research. May 2013: Boulder, Colorado.

Chair. Water Sector Working Group. 2nd International Conference on Climate Services. September 2012: Brussels, Belgium.

Awards & Honors

McCloy Fellowship in Environmental Policy, American Council on Germany, 2011

Scholar, Aspen Institute, Aspen Environment Forum, 2011

H.B. Ellenberger Memorial Award in Political Science, Principia College, 2009

H. Kennedy Economics Award for Academic Excellence, Principia College, 2009

Board of Trustee's Scholarship, Principia College (full-tuition), 2005-2009