

Daniel Ferguson

Institute of the Environment

University of Arizona

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Education

2015	PhD	School of Geography and Development	University of Arizona	Tucson, AZ
1997	MA	American Indian Studies	University of Arizona	Tucson, AZ
1992	BA	Liberal Studies with minors in Psychology, Communications, English	Salisbury State University	Salisbury, MD

Appointments

Associate Research Scientist	University of Arizona Institute of the Environment	March 2017-present
Assistant Professor	University of Arizona School of Natural Resources and the Environment	Feb 2016-present
Affiliated Faculty	University of Arizona American Indian Studies Graduate Interdisciplinary Degree Program	Dec 2016-present
Affiliated Faculty	University of Arizona Arid Lands Resource Sciences Graduate Interdisciplinary Degree Program	Mar 2016-present
Program Director, Climate Assessment for the Southwest	University of Arizona Institute of the Environment	July 2010-present
Program Manager, Climate Assessment for the Southwest	University of Arizona Institute of the Environment	Oct 2007-July 2010
Assistant Staff Scientist	University of Arizona Institute for the Study of Planet Earth	Jan 2005-Oct 2007
Project Manager	Arctic Research Consortium of the US, Fairbanks, AK	Nov 2001-Jan 2005

Publications

Refereed Journal Articles

Crimmins, M. A., **D. B. Ferguson**, A. M. Meadow, and J. L. Weiss. 2017. Discerning “flavors” of drought using climate extremes indices. *Journal of Applied Meteorology and Climatology*. 10.1175/JAMC-D-16-0270.1

Ferguson, D. B., A. Masayeva, A. M. Meadow, and M. A. Crimmins. 2016. Rain Gauges to Range Conditions: Collaborative Development of a Drought Information System to Support Local Decision-Making. *Weather, Climate, and Society* 8 (4):345-359. doi:10.1175/WCAS-D-15-0060.1

- Meadow, A.M., **D. B. Ferguson**, Z. Guido, A. Horangic, G. Owen, and T. Wall. 2015. Moving Toward the Deliberate Co-Production of Climate Science Knowledge. *Weather Climate and Society*. 10.1175/WCAS-D-14-00050.1
- Meadow, A.M., M. Crimmins, and **D.B. Ferguson**. 2013. Field of Dreams or Dream Team: Assessing Two Models of Drought Impact Reporting in the Semi-Arid Southwest. *Bulletin of the American Meteorological Society*. no. 94 (10):1507-1517. doi: 10.1175/BAMS-D-11-00168.1.
- Owen, G., J.D. McLeod, C.A. Kolden, **D.B. Ferguson**, and T. J. Brown. 2012. Wildfire Management and Forecasting Fire Potential: The Roles of Climate Information and Social Networks in the Southwest United States. *Weather, Climate, and Society* 4 (2):90-102.
- Guido, Z., D. Hill, M. Crimmins, and **D.B. Ferguson**. 2012. Informing Decisions with a Climate Synthesis Product: Implications for Regional Climate Services. *Weather, Climate, and Society* 5 (1):83-92.
- Morehouse, B. J., **D.B. Ferguson**, G. Owen, A. Browning-Aiken, P. Wong-Gonzalez, N. Pineda, and R. Varady. 2008. Science and socio-ecological resilience: examples from the Arizona-Sonora Border. *Environmental Science & Policy*. 11: 272-284.

Book Sections

- Ferguson, D.B.**, M.L. Finucane, V.W. Keener, and G. Owen. 2016. Evaluation to Advance Science Policy: Lessons from Pacific RISA and CLIMAS. In *Climate in Context*, eds. A. Parris and G. Garfin, 215-234. New York: Wiley-Blackwell.

Other Publications

- Vano, J.A., D. Behar, P. Mote, **D.B. Ferguson**, and R. Pandya. [In review]. Science in Society: Fostering scientist-decision maker engagement at AGU. *Eos*.
- Meadow, A.M., **D.B. Ferguson**. 2017. Our Climate is Doing What? Tailoring Information about Regional Climate to Support Local Adaptation Decision Making. *Rural Connections*.
- Ferguson, D.B.**, M.A. Crimmins, A. Masayeva, A.M. Meadow, J.L. Weiss, H. Faulstich. 2017. Drought Monitoring to Support Planning for the Hopi Tribe: Final Report from 2010-2016 Collaboration between the Hopi Department of Natural Resources and the Climate Assessment for the Southwest. Tucson, AZ: Climate Assessment for the Southwest.
- Meadow, A., J. Weiss, S. Leroy, M. Black, **D.B. Ferguson**, and M. Crimmins. 2016. Climate Profile for the Truckee River Basin and Pyramid Lake Indian Reservation. Tucson, AZ: Native Nations Climate Adaptation Program, University of Arizona.
- Meadow, A., M. Black, M. Crimmins, **D.B. Ferguson**, and J. Weiss (2016) Climate Profile of Gila River Indian Community. Tucson, AZ: Native Nations Climate Adaptation Program, University of Arizona.
- Crimmins, M.A., **D.B. Ferguson**, J.L. Weiss, and H. Faulstich. 2015. Hopi Climate: An Overview to Support Drought Monitoring and Management. Tucson, AZ: Climate Assessment for the Southwest.
- Ferguson, D.B.**, R. Thomas, Z. Guido, L. Ethen, C. Zucker, G. Chorover, and R. Johnson. 2014. Planning for Change in Southern Arizona: A report from the Southern Arizona Regional Climate Summit for Municipal Leaders. Tucson: Climate Assessment for the Southwest.
- Ferguson, D. B.**, J. Rice, and C. Woodhouse. 2014. Linking Environmental Research and Practice: Lessons from the Integration of Climate Science and Water Management in the Western United States. Tucson, AZ: Climate Assessment for the Southwest.
<http://www.climas.arizona.edu/publication/report/linking-environmental-research-and-practice>
- Lackstrom, K., A. Brennan, **D. Ferguson**, M. Crimmins, L. Darby, K. Dow, K. Ingram, A. Meadow, H. Reges, M. Shafer, and K. Smith. 2013. *The Missing Piece: Drought Impact Monitoring*. Carolinas Integrated Sciences & Assessments and Climate Assessment for the Southwest.
www.climas.arizona.edu/publications/2852

Meadow, A.M., **Ferguson, D.B.**, and Crimmins, M. 2013. Helping a Community Develop a Drought Impacts Reporting System. *Rural Connections*. 7 (1): 15-18.

Ferguson, D. B., C. Alvord, M. Crimmins, M. H. Redsteer, C. McNutt, M. Hayes, M. Svoboda and R. Pulwarty. 2011. Drought Preparedness for Tribes in the Four Corners Region. A report from NIDIS Four Corners Drought workshop held in Flagstaff, AZ, April 8-9, 2010. Climate Assessment for the Southwest, University of Arizona. www.climas.arizona.edu/publications/2085

Guido, Z., **D.B. Ferguson**, and G. Garfin. 2008. Putting Knowledge into Action: Tapping the Institutional Knowledge of U.S. Fish and Wildlife Service Regions 2 and 8 to Address Climate Change. A report from the workshop entitled "Effects of Climate Change on Fish, Wildlife and Habitats in the Arid and Semiarid Southwestern United States: Putting Knowledge and Science into Action" held in Tucson, AZ, August 19-20, 2008. Climate Assessment for the Southwest, University of Arizona. www.climas.arizona.edu/publications/942

Ferguson, D.B., B.J. Morehouse, and R. Steinberger. 2006. Proceedings from Sustainability Under Uncertainty in Arid and Semiarid Ecosystems Workshops held in Tucson, AZ, Jan. 19-21, 2005 & May 5-6, 2005. Institute for the Study of Planet Earth, University of Arizona, 44 p.

Research Grants and Contracts

Lead PI or Co-PI on grants and contracts totaling \$8,346,008 between 2008-2017.

Teaching

- 2016-present: Development of Transdisciplinary Science for Society (TESS) UA online professional development courses with Connie Woodhouse (School of Geography and Development), Mónica Ramírez-Andreotta (Soil, Water, and Environmental Science), and Gregg Garfin (School of Natural Resources and the Environment)
- 2010-present: Co-teach (with Connie Woodhouse) Geography 596m: Connecting Environmental Science and Decision Making graduate seminar
- 2014: Environmental Studies 260: Ideas and Institutions
- 2008-present: Guest lectures in University of Arizona undergraduate courses and graduate seminars, including: Geography and Development 530, The Climate System; School of Natural Resources and the Environment 496b/696a, Adaptation to Climate Change; Soil, Water, and Environmental Sciences 596b, Arizona Water Policy; Global Change 695, Global Change Toolkit; American Indian Studies 541a, Natural Resource Management in Native Communities; American Indian Studies 200, Introduction to American Indian Studies.
- Aug.–Dec. 1999: Teaching Assistant, English Department, University of Alaska, Fairbanks. Taught one section of Introduction to Composition.
- June–July 1997: Adjunct Instructor, Diné College, Tsaile, Arizona (Navajo Nation). Taught Introduction to Literature to Navajo adults.
- Aug. 1996–May 1997: Teaching Assistant, American Indian Studies Program, University of Arizona, Tucson, AZ. Taught one section of Native American Literature each semester.

Graduate student mentoring

Committee member: Kerrie Geil, Hydrology and Atmospheric Sciences (PhD, graduated Dec 2016); Marie Blanche Roudaut, Arid Lands Resource Sciences (PhD); Ladd Keith, Arid Lands Resource Sciences (PhD); Stina Janssen, School of Geography and Development (MA)

Presentations

Academic Conferences

- Ferguson, D.B. December 2016. More than just consumers: Integrating local observations into environmental monitoring systems to better support decision making. American Geophysical Union Annual Meeting. San Francisco, CA.
- Ferguson, D.B. December 2015. Linking Environmental Research and Practice: Lessons from the Integration of Climate Science and Water Management in the Western United States. American Geophysical Union Annual Meeting. San Francisco, CA. (*Invited*)
- Ferguson, D.B. April 2015. Transdisciplinary climate research to support tribal sovereignty. Association of American Geographers Annual Conference. Chicago, IL.
- Ferguson, D.B. September 2013. How can local observations of drought impacts help support long-term climate adaptation planning? 12th Biennial Conference of Science and Management on the Colorado Plateau, Flagstaff, AZ.
- Ferguson, D.B. April 2013. Blending local knowledge with scientific data to support long-term climate adaptation. Association of American Geographers annual meeting, Los Angeles, CA.
- Ferguson, D.B. May 2012. Are we successfully connecting science to support adaptation to decision making? Adaptation Futures 2012 International Conference on Climate Adaptation, Tucson, AZ.
- Ferguson, D.B. May 2012. Blending local knowledge with scientific data to support long-term climate adaptation. Adaptation Futures 2012 International Conference on Climate Adaptation, Tucson, AZ.
- Ferguson, D.B. January 2012. Evaluating CLIMAS: A brief survey of recent efforts to evaluate the impact of the Climate Assessment for the Southwest. American Meteorological Society 92nd Annual Meeting. New Orleans, LA.
- Ferguson, D.B. January 2012. Melding local knowledge with scientific data to fill a climate monitoring gap in the US Southwest. American Meteorological Society 92nd Annual Meeting. New Orleans, LA.
- Ferguson, DB. January 2011. Development of experimental climate service networks: Lessons from a multi-region project. American Meteorological Society 91st Annual Meeting. Seattle, WA.
- Ferguson, D.B. January 2010. Beyond the boundary: Knowledge networks and climate services. American Meteorological Society 90th Annual Meeting. Atlanta, GA.
- Ferguson, D.B. December 2008. Are we bridging the gap? Evaluating climate assessment and translational science efforts in the US Southwest. American Geophysical Union Annual Meeting. San Francisco, CA.

Other Presentations (last 3 years)

- Ferguson, D.B. April 2017. Recent and projected climate change in Arizona and the broader Southwest. Central Arizona Project Climate Adaptation Workshop. Phoenix, AZ.
- Ferguson, D.B. March 2017. Overview of Navajo Nation Climate: Historic conditions and projections of the future. Navajo Nation Department of Fish and Wildlife Climate Change Training. University of Arizona. Tucson, Arizona
- Ferguson, D.B. September 2016. An Approach to Drought Monitoring in the Semi-Arid Four Corners. Intermountain West Drought Early Warning System Drought & Climate Outlook. Biosphere 2, Oracle, AZ.
- Ferguson, D.B. July 2016. Making science useful for society: Conducting socially-relevant climate science at the University of Arizona. Southern Arizona Environmental Management Society. Tucson, AZ.

Ferguson, D.B. February 2016. Socially-engaged climate research to support decision making: Why it's important, how it can be done, and how we can teach it. University of Arizona Dept of Soil, Water, and Environmental Science Colloquium. Tucson, AZ.

Meadow, A.M. and D.B. Ferguson. October 2015. Moving Toward the Deliberate Coproduction of Climate Science Knowledge. USGS Climate Science Center webinar series. Ferguson, D.B. January 2015. Supporting graduate students to pursue use-inspired research. NOAA Regional Integrated Sciences and Assessments Annual Meeting. Charleston, SC.

Ferguson, D.B. January 2015. Reducing the Gaps Between Climate Research and Decision Making by Recognizing Epistemic Diversity. NOAA Regional Integrated Sciences and Assessments Annual Meeting. Charleston, SC.

Ferguson, D.B. December 2014. How can a transdisciplinary approach to environmental monitoring support tribal sovereignty? 60 Minutes from Indian Country. University of Arizona James E. Rogers College of Law. Tucson, AZ.

Ferguson, D.B. May 2014. Shrinking the Gap Between Environmental Science and Decision Making. 5th Joint Fire Science Program Knowledge Exchange Consortia Meeting. Tucson, AZ.

Ferguson, D.B. April 2014. Linking Environmental Research and Practice. NOAA Sectoral Applications Research Program Webinar Series on Stakeholder Communication.

Professional Association Memberships

- American Geophysical Union 2008-present
- American Meteorological Society 2009-present
- American Association for the Advancement of Science 2017-present

Honor/Awards

- University of Arizona Staff Award for Excellence April 2010

Professional Service

Reviewer

- Manuscript reviewer for *BioScience*; *Climatic Change*; *Climate Risk Management*; *Journal of the American Water Resources Association*; *Journal of Applied Meteorology and Climatology*; *Journal of Hydrometeorology*; *Weather, Climate, and Society*, *Science of the Total Environment*
- Review technical manuscripts for US Geological Survey Flagstaff Science Center
- Review editor, 2013 Southwest Climate Assessment Tribal Lands chapter
- Expert reviewer, 2014 National Climate Assessment Special Report on Sustained Assessment

Professional Committee Membership

- Advisory board member, UA Center for Climate Adaptation Science and Solutions
- Executive committee member, UA graduate degree certificate in Connecting Environmental Science and Decision Making
- Executive committee member (ex officio), Climate Assessment for the Southwest program
- Member, Federation of Earth Science Information Partners (ESIP) Environmental Decision Making cluster

Meeting/Workshop Organization

- Workshop planning committees:

- Indigenous Policy Forum: Cultural Uses of Water. April 11-13, 2017. University of Arizona. Tucson, AZ.
- Aspen Global Change Institute workshop, “Expanding the Science-Policy Interface to Confront Global Change.” October 9-14, 2016. Aspen, CO.
- Water Utility Climate Alliance (WUCA) workshop, “Co-Producing Actionable Science for Water Utilities: Case Studies and Next Steps.” May 2-3, 2016. Boulder, CO.
- NOAA Regional Integrated Sciences and Assessments Annual Meeting. February 23-25, 2016. Tucson, AZ.
- 13th Biennial Conference of Science and Management on the Colorado Plateau and Southwest Region. Flagstaff, AZ. October 5-8, 2015 (*Invited session*)
- NOAA Regional Integrated Sciences and Assessments Annual Meeting. January 13-15, 2015. Charleston, SC.
- Regional Climate Summit for Municipal Leaders: Economic, Health, Water & Transportation Impacts, November 14, 2013, Tucson, AZ
- Climate Change Science for Southwestern Broadcast Meteorologists and Weathercasters, September 28, 2013, Tucson, AZ
- Arizona Municipal Climate Planning Workshop, October 18–19, 2012, Tempe, AZ
- Hydrologic Extremes and Water Management in a Warmer World – California Perspectives, May 19–20, 2011, La Jolla, CA
- Knowledge to Action: Connecting Climate Science and Resource Management Workshop, March 3-4, 2011, Tucson, AZ
- Drought Preparedness for Tribes in the Four Corners Region Workshop, April 8-9, 2010, Flagstaff, Arizona
- Tribal Climate Change Adaptation Planning & Inter-Governmental Coordination Workshop October 5-6, 2010, Boulder, Colorado
- Sustainability Under Uncertainty in Arid and Semiarid Ecosystems Workshops, Tucson, AZ, Jan. 19-21, 2005 & May 5-6, 2005
- Co-organize academic conference sessions:
 - *Towards more effective decision maker-scientist engagement* with Julie Vano, Phil Mote, and David Behar. American Geophysical Union annual meeting, San Francisco, CA, December 2016.
 - *Collaborative environmental research in the Southwest: Examples from the field* at the Biennial Conference of Science and Management on the Colorado Plateau with Christopher Guiterman. Flagstaff, AZ, Oct. 5-8, 2015.
 - *Training the next generation of use-inspired researchers* at the NOAA Regional Integrated Sciences and Assessments Annual Meeting with Connie Woodhouse. Charleston, SC, January 13-15, 2015.
 - *Do Climate Services Make a Difference? Evaluating the development and provision of climate information* at 10th Symposium on Societal Applications: Policy, Research and Practice with Zack Guido, University of Arizona. American Meteorological Society 92nd Annual Meeting, Phoenix, AZ, January 2015.
 - *Adapting to Climate Change, in Seventh Symposium on Policy and Socio-Economic Research* with Jessica Whitehead, University of South Carolina. American Meteorological Society 95th Annual Meeting, New Orleans, LA, January 2012.
 - *Political Climate: New Explorations of Science, Policy, and Climate Change* with Jennifer Rice and Connie Woodhouse. Association of American Geographers annual meeting, Seattle, WA, April 2011.
 - *Progress and Challenges in Bridging the Gap Between Science and Decision Making* with Connie Woodhouse, Jennifer Rice, and Andrea Ray. American Geophysical Union annual meeting, San Francisco, CA, December 2008.

Professional References

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Atmospheric Sciences
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