

JUSTIN STALLER MANKIN

CONTACT INFORMATION	Ocean & Climate Physics Lamont-Doherty Earth Observatory 61 Route 9W, P.O. Box 1000 Palisades, NY 10964	Primary Email: jsmankin@ldeo.columbia.edu Website: jsmankin.github.io Primary Phone: (845) 365-8373
	NASA Goddard Institute for Space Studies (GISS) 2880 Broadway New York, NY 10025 USA	Secondary Email: justin.mankin@nasa.gov Secondary Phone: (212) 678-5549
RESEARCH	Climate change, variability, impacts, and uncertainty; hydroclimate; land-atmosphere interactions, hydrology, human and natural systems vulnerability and response to climate variability and change; future water and agriculture	
EDUCATION	Ph.D. , Environment & Resources, 2015 Stanford University , School of Earth, Energy, & Environmental Sciences, Stanford, California	
	M.P.A. , Environmental Science & Policy, 2010 Columbia University , The Earth Institute & SIPA, New York, New York	
	M.Sc. , Global Politics & Development Studies, 2008 The London School of Economics (LSE) , London, England	
	B.A. , Political Science, 2004 Columbia University , New York, New York	
RESEARCH APPOINTMENTS	Lamont-Doherty Earth Observatory of Columbia University NASA Goddard Institute for Space Studies New York, New York USA Earth Institute Postdoctoral Research Fellow 2015-present Design and perform basic and applied research on climate variability, change, and climate impacts using large ensembles of models, observations, and paleoclimatic proxy data.	
	Emmett Interdisciplinary Program in Environment & Resources Department of Earth System Science of Stanford University Stanford, California USA Predoctoral Research Fellow 2010-2015 Led research on climate variability and its influence on the cryosphere and freshwater availability.	
	The Earth Institute Water Center of Columbia University New York, New York, USA Research Assistant Winter-Spring 2010 Conducted hydrological research on changes in glacial runoff in Central Asia.	
	Stanford University , Stanford, California USA Teaching Assistant, EARTHSYS 41N, The Global Warming Paradox Fall 2013 Teaching Consultant, BIO/EARTHSYS 147/247, Controlling Climate Change Spring 2012	
	International Security Assistance Force (ISAF) , Kabul, Afghanistan Senior Anti-Corruption Advisor Winter 2011-2012	
PROFESSIONAL APPOINTMENTS	United States Government , Washington, District of Columbia, USA Intelligence Officer 2004-2008	

PUBLICATIONS

PEER-REVIEWED ARTICLES

8. Ault, T., **J. S. Mankin**, B. I. Cook, J. E. Smerdon, Relative impacts of mitigation, temperature, and precipitation on 21st Century megadrought risk in the American Southwest, *Science Advances*, (2016), 10.1126/sciadv.1600873.
7. Horton, R., **J. S. Mankin**, C. Lesk, E. Coffel, C. Raymond, A review of recent advances in research on extreme heat events, *Current Climate Change Reports*, (2016), 10.1007/s40641-016-0042-x.
6. Coats, S. & **J. S. Mankin**, The challenge of accurately quantifying future megadrought risk in the American Southwest, *Geophysical Research Letters*, (2016), 10.1002/2016GL070445.
5. Singh, D, D. L. Swain, **J. S. Mankin**, D. E. Horton, L. Thomas, N. S. Diffenbaugh, Recent amplification of the North American winter temperature dipole, *Journal of Geophysical Research: Atmospheres*, (2016), 10.1002/2016JD025116.
4. **Mankin, J. S.**, D. Viviroli, D. Singh, A. Y. Hoekstra, and N. S. Diffenbaugh, The potential for snow to supply human water demand in the present and future, *Environmental Research Letters*, (2015), DOI 10.1088/1748-9326/10/11/114016.
3. **Mankin, J. S.**, N. S. Diffenbaugh, Influence of temperature and precipitation variability on near-term snow trends, *Climate Dynamics*, **45** 1099-1116, (2015), DOI 10.1007/s00382-014-2357-4.
2. Siegfried, T., T. Bernauer, R. Guennet, S. Sellars, A. W. Robertson, **J. S. Mankin**, P. Bauer-Gottwein, Will Climate Change Exacerbate or Mitigate Water Stress in Central Asia?, *Climatic Change*, **112** (3-4), 881 (2012), DOI 10.1007/s10584-011-0253-z.
1. **Mankin, J. S.**, Gaming the system: how Afghan opium underpins local power, *Journal of International Affairs*, **63** (1), 195 (2009).

PEER-REVIEWED BOOK CHAPTERS

1. Moore, F., **J. S. Mankin**, A. H. Becker, Disciplines: Integrating Climate and Social Sciences, Chapter 4 in *Climate Cultures: Anthropological Perspectives on Climate Change*. Jessica Barnes and Michael Dove (eds). New Haven: Yale University Press, (2015).

MANUSCRIPTS SUBMITTED OR IN REVISION

3. **Mankin, J. S.**, D. Viviroli, M. M. Mekonnen, A. Y. Hoekstra, and N. S. Diffenbaugh, Future population exposure to hydroclimatic deficits, *in revision*.
2. Schultz, K. & **J. S. Mankin**, Sources of uncertainty in forecasting the climate-conflict relationship, *in revision*.
1. Diffenbaugh, N. S., D. Singh, **J. S. Mankin**, A. Charland, M. Haugen, D. E. Horton, D. L. Swain, D. E. Touma, M. Tsiang, B. Rajaratnam, Quantifying the influence of historical global warming on the probability of unprecedented extreme climate events, *in review*.

MANUSCRIPTS IN PREPARATION (FULL DRAFTS ONLY)

4. **Mankin, J. S.**, J. E. Smerdon, B. I. Cook, A. P. Williams, R. Seager, Transpiration-driven aridification of the American West in 21st century model projections.
3. **Mankin, J. S.**, M. Tsiang, B. Rajaratnam, and N. S. Diffenbaugh, A model of Afghan poppy farmer decision-making.
2. Schultz, K. & **J. S. Mankin**, The influence of conflict on temperature.
1. Swain, D. L., D. Singh, D. Horton, **J. S. Mankin**, T. Ballard, N. S. Diffenbaugh, Earth system linkages to anomalous northeastern Pacific atmospheric ridging.

OTHER PUBLICATIONS

2. **Mankin, J. S.**, Rotten to the core, *Foreign Policy*, (2011).

1. **Mankin, J. S.**, Preventive semantics, *Foreign Policy*, 146 (2005).

GRANTS

Earth Institute Cross-Cutting Initiative, Assessing farmer vulnerability in India to increasing risks from climate extremes, co-PI with D. Singh, R. DeFries, M. Ting, 2016 (\$23,000).

E-IPER Graduate Summer Research Grant, 2012.

McGee Grant, Stanford University, School of Earth Sciences, 2011.

FELLOWSHIPS

Earth Institute Postdoctoral Fellowship, Lamont-Doherty Earth Observatory & The Center for Climate Systems Research, 2015-2017.

Northeast Climate Science Center Fellowship, The Center for Climate Systems Research & University of Massachusetts, Amherst, 2015-2017.

Geography Postdoctoral Fellowship, Dartmouth College, 2015-2017. (*declined*)

Predocutorial Science Fellowship, Center for International Security and Cooperation (CISAC), Stanford University, tuition and stipend, 2014-2015.

Stanford Center on International Conflict and Negotiation (SCICN) Fellowship, Stanford Law School, 2012-2013.

Margaret Jonsson Family Foundation Fellowship, School of Earth Sciences, Stanford University, tuition and stipend, 2010-2014.

Environmental Science Academic Fellowship, Columbia University, 2010.

ACADEMIC HONORS AND AWARDS

Environmental Research Letters Editors' Highlight of 2015, April 2016.

IOP Select Article, "The potential for snow to supply human water demand in the present and future", ERL, 2015.

Environmental Research Letters Monthly Highlights Collection, November 2015.

Rising Environmental Leadership Program (RELP), Woods Institute for the Environment, Stanford University, 2012-2013.

Andrew Wellington Cordier Essay Winner, Columbia University, 2009.

Distinction, MSc. Thesis, London School of Economics, 2008.

ACADEMIC CERTIFICATIONS

National Center for Atmospheric Research (NCAR), Boulder, CO, USA
Community Land Model Workshop **September 2016**

National Centre of Competence in Research, Climate (NCCR), Grindewald, Switzerland
NCCR Swiss Climate Research Summer School **Summer 2013**

National Center for Atmospheric Research (NCAR), Boulder, CO, USA
Community Earth System Model (CESM) Workshop **Summer 2012**

ACADEMIC SERVICE

Journal referee: Journal of Climate, Geophysical Research Letters, Environmental Research Letters, Nature Climate Change, Journal of Geophysical Research-Atmospheres, Earth-Science Reviews

Seminar organizer: Lamont-Doherty Earth Observatory Division of Ocean & Climate Physics Seminar, 2016-2017

Conference organizer: PAGES2k PMIP3 Workshop planning committee, Lamont-Doherty Earth

Observatory, June 1-3 2016

PhD student representative: E-IPER Representative to the Executive Committee, Stanford University, 2011-2012.

Professional societies: Member, American Geophysical Union (AGU), 2010-present; American Meteorological Society (AMS), 2012-present

PRESENTATIONS

INVITED TALKS

12. **Mankin, J. S.**, Diagnosing future hydroclimate risks in the context of climate uncertainty, Society, Water, and Climate, The University of Utah, Salt Lake City, Utah, USA, 29 November 2016.

11. **Mankin, J. S.**, A warm(ing) Earth and what (or who) is responsible for it, Urban Ecology Studio, Graduate School of Architecture, Planning, and Preservation, Columbia University, New York, NY, USA, 30 June 2016 and again 28 September 2016.

10. **Mankin, J. S.**, Identifying human impacts of climate change in the context of climate uncertainty, Department of Earth & Planetary Sciences Seminar, Northwestern University, Evanston, IL, USA, 19 February 2016.

9. Diffenbaugh, N. S., **J. S. Mankin**, D. Singh, D. Swain, Earth Matters Series, “A Matter of Degrees”, School of Continuing Education, Stanford University, Stanford, CA, USA, 24 February 2015.

8. **Mankin, J. S.**, Near-term hydroclimatic change, climate uncertainty, and adaptation decision-making, Ocean & Climate Physics Seminar, Lamont-Doherty Earth Observatory, Palisades, NY, 20 February 2015.

7. **Mankin, J. S.**, Crossing the isotherm: climate uncertainty, snow, and water security in a warming world. Center for International Security and Cooperation (CISAC), Freeman Spogli Institute (FSI), Stanford, CA, USA, 15 January 2015.

6. **Mankin, J. S.**, Does climate cause conflict? Stanford Center on International Conflict and Negotiation (SCICN), Stanford, CA, 28 May 2013.

5. **Mankin, J. S.** and N. S. Diffenbaugh, From climate to violence: A potential mechanism in climate-conflict interactions in Afghanistan, Knowledge transfer program (KTP), University of Reading, Reading, UK, 4 May 2012.

4. **Mankin, J. S.** and N. S. Diffenbaugh, From planting to violence: socioclimatic exposure of an Afghan poppy farm, Policy & Economic Research Roundtable (PERR), Stanford University, Stanford, CA, USA, 27 January 2012.

3. **Mankin, J. S.**, Climate change and security: making the connections, National Conference on Science, Policy and the Environment (NCSE): Environment and Security, Washington, DC, USA, 18 January 2012.

2. **Mankin, J. S.**, Security and the Environment: the case of Afghanistan, Center for International Security and Cooperation (CISAC), Hewlett Foundation, CA, USA, 17 January 2012.

1. **Mankin, J. S.**, Soundly addressing corruption under the aegis of the NATO mission in Afghanistan, NATO ISAF HQ CJIATF-Shafafiyat, Kabul, Afghanistan, 30 January 2011.

CONTRIBUTED TALKS (1st AUTHOR ONLY)

4. **Mankin, J. S.**, J. E. Smerdon, B. I. Cook, A. P. Williams, R. Seager, Transpiration-driven aridification of the American West in 21st century model projections, American Geophysical Union Annual Meeting, San Francisco, CA, USA, 12 December 2016.
3. **Mankin, J. S.**, Climate certainty, uncertainty and human water availability in a warming world, Stanford University, Stanford, CA, USA, 12 June 2015.
2. **Mankin, J. S.**, D. Viviroli, M. M. Mekonnen, A. Y. Hoekstra, and N. S. Diffenbaugh, Quantifying the crucial role of snow in supplying human water demand. American Geophysical Union Annual Meeting, San Francisco, CA, USA, 15 December 2014.
1. **Mankin, J. S.**, M. Scherer, and N. S. Diffenbaugh, Diagnosing the inter-model spread in snow water equivalent over Central and Southwest Asia. Stanford School of Earth Sciences Review, CA, USA, 12 April 2013.

POSTER PRESENTATIONS

8. Horton, D. E., **Mankin, J.S.**, Singh, D., Swain, D. L., Johnson, N. C., Diffenbaugh, N. S., Probability of Atmospheric Circulation Pattern Occurrence in Pre-Industrial, Historical, and Future Climates, American Geophysical Union Annual Meeting, San Francisco, CA, USA, 18 December 2015.
7. **Mankin, J. S.** and N. S. Diffenbaugh, Internal variability's influence on future Northern Hemisphere snow accumulation. American Geophysical Union Annual Meeting, San Francisco, CA, USA, 10 December 2013.
6. **Mankin, J. S.** and N. S. Diffenbaugh, Climate controls on future Northern Hemisphere snow-dependent water availability. National Centre of Competence in Research Climate (NCCR), Grindelwald, Switzerland, 5 September 2013.
5. **Mankin, J. S.**, M. Scherer, and N. S. Diffenbaugh, Diagnosing the inter-model spread in snow water equivalent over Central and Southwest Asia. Berkeley Atmospheric Science Symposium, Berkeley, CA, USA, 8 February 2013.
4. **Mankin, J. S.**, M. Scherer, and N. S. Diffenbaugh, Diagnosing the inter-model spread in snow water equivalent over Central and Southwest Asia. American Geophysical Union Annual Meeting, San Francisco, CA, USA 7 December 2012.
3. **Mankin, J. S.** and N. S. Diffenbaugh, Socioclimatic exposure of an Afghan poppy farm, American Geophysical Union Annual Meeting, San Francisco, CA, USA, 7 December 2011.
2. **Mankin, J. S.** and N.S. Diffenbaugh, Climate signals in Afghan agricultural decision-making MIT Graduate Climate Conference, Woods Hole, MA, USA, 29 October 2011.
1. T. Siegfried, T. Bernauer, R. Guennet, S. Sellars, A. W. Robertson, **J. S. Mankin**, P. Bauer-Gottwein, Will Climate Change Exacerbate or Mitigate Water Stress in Central Asia? American Geophysical Union Annual Meeting, San Francisco, CA, USA, 17 December 2010.

SKILLS &
MISCELLANY

Technical: Unix/Linux shell, NCL, R, Matlab, Python/Jupyter, ArcGIS, ENVI, git, HTML, CSS
L^AT_EX

Clearance: Top Secret/Sensitive Compartmented Information (TS/SCI) clearance, granted 2004; NATO Secret as of 2011

SCIENTIFIC
COMMUNICATION &
OUTREACH

Media interviews and coverage of research (truncated): NYTimes, Nature, BBC World News, National Geographic, The Atlantic, The Weather Channel, FSRN, NPR Academic Minute, LA Times, The Christian Science Monitor, Phys.org, CarbonBrief, environmentalresearchnews, Hurriyet, Radio Ecoshock, Salon, China Radio International, SciDev, Columbia Magazine, USA Today