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Peer-Reviewed Journal Articles

1. Hoell, A. and J. Eischeid, 2019: On the Interpretation of Seasonal Southern Africa Precipitation Prediction Skill Estimates during Austral Summer. *Climate Dynamics*. 0
2. Zhang, T., A. Hoell, J. Perlwitz, J. Eischeid, D. Murray, M. Hoerling, and T. M. Hamill, 2019: Towards Probabilistic Multivariate ENSO Monitoring. *Geophysical Research Letters*, 0.
3. Hoell, A., J. Perlwitz, C. Dewes, K. Wolter, I. Rangwala, X.-W. Quan, and J. Eischeid, 2019: Anthropogenic Contributions to the Intensity of the 2017 United States Northern Great Plains Drought. *Bulletin of the American Meteorological Society*, 100, S19-S24.
4. Funk, C., and Coauthors, 2019: Recognizing the Famine Early Warning Systems Network: Over 30 Years of Drought Early Warning Science Advances and Partnerships Promoting Global Food Security. *Bulletin of the American Meteorological Society*, 100, 1011-1027.
5. Agel, L., M. Barlow, F. Colby, H. Binder, J. L. Catto, A. Hoell, and J. Cohen, 2019: Dynamical analysis of extreme precipitation in the US northeast based on large-scale meteorological patterns. *Clim Dyn*, 52, 1739-1760.

6. Hoell, A., F. Cannon, and M. Barlow, 2018: Middle East and Southwest Asia Daily Precipitation Characteristics Associated with the Madden–Julian Oscillation during Boreal Winter. *Journal of Climate*, 31, 8843-8860.
7. Hoell, A., M. Barlow, T. Xu, and T. Zhang, 2018: Cold Season Southwest Asia Precipitation Sensitivity to El Niño–Southern Oscillation Events. *Journal of Climate*, 31, 4463-4482.
8. Stott, P. A., N. Christidis, S. C. Herring, A. Hoell, J. P. Kossin, and C. J. Schreck, 2018: Future Challenges in Event Attribution Methodologies. *Bulletin of the American Meteorological Society*, 99, S155-S157.
9. Funk, C., and Coauthors, 2018: Examining the Potential Contributions of Extreme “Western V” Sea Surface Temperatures to the 2017 March–June East African Drought. *Bulletin of the American Meteorological Society*, 100, S55-S60.
10. Quan, X.-W., and Coauthors, 2018: Extreme California Rains During Winter 2015/16: A Change in El Niño Teleconnection? *Bulletin of the American Meteorological Society*, 99, S49-S53.
11. Herring, S. C., N. Christidis, A. Hoell, J. P. Kossin, C. J. Schreck, and P. A. Stott, 2018: Explaining Extreme Events of 2016 from a Climate Perspective. *Bulletin of the American Meteorological Society*, 99, S1-S157.
12. Hoell, A., and L. Cheng, 2018: Austral summer Southern Africa precipitation extremes forced by the El Niño–Southern oscillation and the subtropical Indian Ocean dipole. *Clim Dyn*, 50, 3219-3236.

13. Morrill, C., D. P. Lowry, and A. Hoell, 2018: Thermodynamic and Dynamic Causes of Pluvial Conditions During the Last Glacial Maximum in Western North America. *Geophysical Research Letters*, 45, 335-345.
14. Zhang, T., and Coauthors, 2017: Predictability and Prediction of Southern California Rains during Strong El Niño Events: A Focus on the Failed 2016 Winter Rains. *Journal of Climate*, 31, 555-574.
15. Liebmann, B., and Coauthors, 2017: Climatology and Interannual Variability of Boreal Spring Wet Season Precipitation in the Eastern Horn of Africa and Implications for Its Recent Decline. *Journal of Climate*, 30, 3867-3886.
16. Hoell, A., M. Barlow, F. Cannon, and T. Xu, 2017: Oceanic Origins of Historical Southwest Asia Precipitation During the Boreal Cold Season. *Journal of Climate*, 30, 2885-2903.
17. Sossa, A., B. Liebmann, I. Bladé, D. Allured, H. H. Hendon, P. Peterson, and A. Hoell, 2017: Statistical Connection between the Madden–Julian Oscillation and Large Daily Precipitation Events in West Africa. *Journal of Climate*, 30, 1999-2010.
18. Dole, R. M., and Coauthors, 2017: Advancing Science and Services during the 2015/16 El Niño: The NOAA El Niño Rapid Response Field Campaign. *Bulletin of the American Meteorological Society*, 99, 975-1001.
19. Hoell, A., C. Funk, J. Zinke, and L. Harrison, 2017: Modulation of the Southern Africa precipitation response to the El Niño Southern Oscillation by the subtropical Indian Ocean Dipole. *Clim Dyn*, 48, 2529-2540.

20. Cannon, F., L. M. V. Carvalho, C. Jones, A. Hoell, J. Norris, G. N. Kiladis, and A. A. Tahir, 2017: The influence of tropical forcing on extreme winter precipitation in the western Himalaya. *Clim Dyn*, 48, 1213-1232.
21. Hoell, A., A. E. Gaughan, S. Shukla, and T. Magadzire, 2017: The Hydrologic Effects of Synchronous El Niño–Southern Oscillation and Subtropical Indian Ocean Dipole Events over Southern Africa. *Journal of Hydrometeorology*, 18, 2407-2424.
22. Hoell, A., M. Hoerling, J. Eischeid, X.-W. Quan, and B. Liebmann, 2016: Reconciling Theories for Human and Natural Attribution of Recent East Africa Drying. *Journal of Climate*, 30, 1939-1957.
23. Funk, C., and Coauthors, 2016: Assessing the Contributions of Local and East Pacific Warming to the 2015 Droughts in Ethiopia and Southern Africa. *Bulletin of the American Meteorological Society*, 97, S75-S80.
24. Shukla, S., J. Roberts, A. Hoell, C. C. Funk, F. Robertson, and B. Kirtman, 2016: Assessing North American multimodel ensemble (NMME) seasonal forecast skill to assist in the early warning of anomalous hydrometeorological events over East Africa. *Clim Dyn*.
25. Hoell, A., and Coauthors, 2016: Does El Niño intensity matter for California precipitation? *Geophysical Research Letters*, 43, 819-825.
26. Gaughan, A. E., C. G. Staub, A. Hoell, A. Weaver, and P. R. Waylen, 2016: Inter- and Intra-annual precipitation variability and associated relationships to ENSO and the IOD in southern Africa. *International Journal of Climatology*, 36, 1643-1656.
27. Barlow, M., B. Zaitchik, S. Paz, E. Black, J. Evans, and A. Hoell, 2015: A Review of Drought in the Middle East and Southwest Asia. *Journal of Climate*, 29, 8547-8574.

28. Hoell, A., S. Shukla, M. Barlow, F. Cannon, C. Kelley, and C. Funk, 2015: The Forcing of Monthly Precipitation Variability over Southwest Asia during the Boreal Cold Season. *Journal of Climate*, 28, 7038-7056.
29. Funk, C. C., and A. Hoell, 2015: The Leading Mode of Observed and CMIP5 ENSO-Residual Sea Surface Temperatures and Associated Changes in Indo-Pacific Climate. *Journal of Climate*, 28, 4309-4329.
30. Funk, C., S. Shukla, A. Hoell, and B. Livneh, 2015: Assessing the Contributions of East African and West Pacific Warming to the 2014 Boreal Spring East African Drought. *Bulletin of the American Meteorological Society*, 96, S77-S82.
31. Barlow, M., and A. Hoell, 2015: Drought in the Middle East and Central–Southwest Asia During Winter 2013/14. *Bulletin of the American Meteorological Society*, 96, S71-S76.
32. Hoell, A., C. Funk, T. Magadzire, J. Zinke, and G. Husak, 2015: El Niño–Southern Oscillation diversity and Southern Africa teleconnections during Austral Summer. *Clim Dyn*, 45, 1583-1599.
33. Funk, C., and Coauthors, 2015: The climate hazards infrared precipitation with stations—a new environmental record for monitoring extremes. *Scientific Data*, 2, 150066.
34. Zinke, J., and Coauthors, 2015: Coral record of southeast Indian Ocean marine heatwaves with intensified Western Pacific temperature gradient. *Nature Communications*, 6, 8562.
35. Hoell, A., C. Funk, and M. Barlow, 2014: The Forcing of Southwestern Asia Teleconnections by Low-Frequency Sea Surface Temperature Variability during Boreal Winter. *Journal of Climate*, 28, 1511-1526.

36. Hoell, A., C. Funk, and M. Barlow, 2014: La Niña diversity and Northwest Indian Ocean Rim teleconnections. *Clim Dyn*, 43, 2707-2724.
37. Hoell, A., and C. Funk, 2014: Indo-Pacific sea surface temperature influences on failed consecutive rainy seasons over eastern Africa. *Clim Dyn*, 43, 1645-1660.
38. Hoell, A., C. Funk, and M. Barlow, 2014: The regional forcing of Northern hemisphere drought during recent warm tropical west Pacific Ocean La Niña events. *Clim Dyn*, 42, 3289-3311.
39. Hoell, A., M. Barlow, M. C. Wheeler, and C. Funk, 2014: Disruptions of El Niño–Southern Oscillation Teleconnections by the Madden–Julian Oscillation. *Geophysical Research Letters*, 41, 998-1004.
40. Shukla, S., C. Funk, and A. Hoell, 2014: Using constructed analogs to improve the skill of National Multi-Model Ensemble March–April–May precipitation forecasts in equatorial East Africa. *Environmental Research Letters*, 9, 094009.
41. Funk, C., and Coauthors, 2014: Predicting East African spring droughts using Pacific and Indian Ocean sea surface temperature indices. *Hydrol. Earth Syst. Sci.*, 18, 4965-4978.
42. Hoell, A., and C. Funk, 2013: The ENSO-Related West Pacific Sea Surface Temperature Gradient. *Journal of Climate*, 26, 9545-9562.
43. Hoell, A., M. Barlow, and R. Saini, 2013: Intraseasonal and Seasonal-to-Interannual Indian Ocean Convection and Hemispheric Teleconnections. *Journal of Climate*, 26, 8850-8867.
44. Saini, R., M. Barlow, and A. Hoell, 2013: Is the North American monsoon self-limiting? *Geophysical Research Letters*, 40, 4442-4447.

45. Hoell, A., M. Barlow, and R. Saini, 2012: The Leading Pattern of Intraseasonal and Interannual Indian Ocean Precipitation Variability and Its Relationship with Asian Circulation during the Boreal Cold Season. *Journal of Climate*, 25, 7509-7526.
46. Saini, R., M. Barlow, and A. Hoell, 2011: Dynamics and Thermodynamics of the Regional Response to the Indian Monsoon Onset. *Journal of Climate*, 24, 5879-5886.
47. Funk, C., M. D. Dettinger, J. C. Michaelsen, J. P. Verdin, M. E. Brown, M. Barlow, and A. Hoell, 2008: Warming of the Indian Ocean threatens eastern and southern African food security but could be mitigated by agricultural development. *Proceedings of the National Academy of Sciences*, 105, 11081.
48. Barlow, M., A. Hoell, and F. Colby, 2007: Examining the wintertime response to tropical convection over the Indian Ocean by modifying convective heating in a full atmospheric model. *Geophysical Research Letters*, 34.

Assessments and Reports

1. Hoell, A., J. Perlwitz and J. Eischeid, 2019: The Causes, Predictability, and Historical Context of the 2017 U.S. Northern Great Plains Drought. NOAA National Integrated Drought Information System. <https://www.drought.gov/drought/documents/causes-predictability-and-historical-context-2017-us-northern-great-plains-drought>
2. Jencso, K., B. Parker, M. Downey, T. Hadwen, A. Howell, J. Rattling Leaf, L. Edwards, and A. Akyuz, D. Kluck, D. Peck, M. Rath, M. Syner, N. Umphlett, H. Wilmer, V. Barnes, D. Clabo, B. Fuchs, M. He, S. Johnson, J. Kimball, D. Longknife, D. Martin, N. Nickerson, J. Sage and T.

- Fransen. 2019. Flash Drought: Lessons Learned from the 2017 Drought Across the U.S. Northern Plains and Canadian Prairies. NOAA National Integrated Drought Information System. <https://www.drought.gov/drought/documents/flash-drought-lessons-learned-2017-drought-across-us-northern-plains-and-canadian-prairies>
3. Herring, S.C., N. Christidis, A. Hoell, M.P. Hoerling, and P.A. Stott, 2019: [Explaining Extreme Events of 2017 from a Climate Perspective](#). Bull. Amer. Meteor. Soc., 100, S1–S117, <https://doi.org/10.1175/BAMS-ExplainingExtremeEvents2017.1>
 4. Herring, S.C., N. Christidis, A. Hoell, J.P. Kossin, C.J. Schreck, and P.A. Stott, 2018: [Explaining Extreme Events of 2016 from a Climate Perspective](#). Bull. Amer. Meteor. Soc., 99, S1–S157, <https://doi.org/10.1175/BAMS-ExplainingExtremeEvents2016.1>
 5. Herring, S.C., A. Hoell, M.P. Hoerling, J.P. Kossin, C.J. Schreck, and P.A. Stott, 2016: [Explaining Extreme Events of 2015 from a Climate Perspective](#). Bull. Amer. Meteor. Soc., 97, S1–S145, <https://doi.org/10.1175/BAMS-ExplainingExtremeEvents2015.1>

Peer-Reviewed Book Chapters

1. Hoell, A., C. Funk, M. Barlow F. and Cannon, 2017: A Physical Model for Extreme Drought over Southwest Asia. In Climate Extremes (eds S. S. Wang, J. Yoon, C. C. Funk and R. R. Gillies). doi:[10.1002/9781119068020.ch17](https://doi.org/10.1002/9781119068020.ch17)

2. Funk, C. and A. Hoell, 2017: Recent Climate Extremes Associated with the West Pacific Warming Mode. In Climate Extremes (eds S. S. Wang, J. Yoon, C. C. Funk and R. R. Gillies). doi:[10.1002/9781119068020.ch10](https://doi.org/10.1002/9781119068020.ch10)
3. Hoell, A., C. Funk, M. Barlow, S. Shukla, 2016: Recent and Possible Future Variations in the North American Monsoon. In: de Carvalho L., Jones C. (eds) The Monsoons and Climate Change. Springer Climate. Springer, Cham
4. Funk, C., A. Hoell, S. Shukla, G. Husak, J. Michaelsen, 2016: The East African Monsoon System: Seasonal Climatologies and Recent Variations. In: de Carvalho L., Jones C. (eds) The Monsoons and Climate Change. Springer Climate. Springer, Cham