

Weston Buckley Anderson

Department of Earth and Environmental Science
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EDUCATION

- Columbia University, New York, NY
PhD Student, Earth and Environmental Science 2014 - Present
 - NSF Graduate Research Fellowship Program
 - Columbia University Dean's Fellow
- Johns Hopkins University, Baltimore, MD
B.S./M.S.E. Environmental Engineering, Systems Analysis May 2012
 - General Honors, Departmental Honors, Wolman Award for Interdisciplinary Study
 - Dean's Master's Fellowship

PROFESSIONAL EXPERIENCE

- Sr. Research Assistant* 2013 - 2014
International Food Policy Research Institute
Research: Water resource management and food security analyses
Advisors: Dr Liangzhi You and Dr. Ephraim Nkonya
- Risk Analyst* 2012 - 2013
Risk Management Solutions
Description: Model-based natural catastrophe risk assessment
- Research Assistant* 2011 - 2012
The Hydroclimate Research Group, Johns Hopkins University
Research: Characterized the 2010-11 East Africa drought using remote sensing products
Advisor: Dr Ben Zaitchik

PUBLICATIONS

In preparation:

Anderson, W.B., Seager, R., Baethgen, W., and Cane, M.: The El Niño Southern Oscillation poses a correlated risk to agriculture in the Pacific basin.

Anderson, W.B., Seager, R., Baethgen, W., and Cane, M.: Trends in Pacific basin crop production variability forced by ENSO variability

Peer reviewed journal publications:

Anderson, W.B., Seager, R., Baethgen, W., and Cane, M. (2017): Crop production variability in North and South America forced by life-cycles of the El Niño Southern Oscillation. (*Ag. Forest. Met.*, accepted)

Anderson, W.B., Seager, R., Baethgen, W., and Cane, M, (2016): Life-cycles of agriculturally relevant ENSO teleconnections in North and South America. *Int. J. Climatol*, doi:10.1002/joc.4916

Anderson, W.B., You, L., Wood, S., Wood-Sichra, U., Wu, W (2015): An analysis of methodological and spatial differences in global cropping systems models and maps. *Glob. Ecol. and Biogeog.* doi: 10.1111/geb.12243

Li, Z., Liu, X., Anderson, W.B., Yang, P., Wu, W., Tang, H. and You, L. (2015): Chinese Rice Production Area Adaptations to Climate Changes, 1949–2010. *Environmental Science & Technology*, doi: 10.1021/es505624x

Anderson, W.B., Guikema S., Zaitchik, B. and Pan, W. (2014): Methods for estimating population density in data-limited areas: evaluating regression and tree-based models in Peru. *PLoS ONE* 9(7): e100037. doi:10.1371/journal.pone.0100037

Nkonya, E. and Anderson, W.B. (2014): Exploiting provisions of land economic productivity without degrading its natural capital, *J. Arid Environ.*, doi:10.1016/j.jaridenv.2014.05.012.

Anderson, W.B., Zaitchik, B.F., Hain, C.R., Anderson, M.C., Yilmaz, M.T., Mecikalski, J., and Schultz, L. (2012) Towards an integrated soil moisture drought monitor for East Africa, *Hydrol. Earth Syst. Sci.*, 16, 2893-2913, doi:10.5194/hess-16-2893-2012.

Other Publications:

Anderson, W.B., Johnson, T. (2015) *Evaluating global land degradation using ground-based measurements and remote sensing* in Nkonya, E., Mirzavaev, A., and von Braun, J. "Global assessment of the economics of land degradation and improvement"

Xie, H., You, L., Anderson, W.B., Ringler, C., Cenacchi, N., Perez, N. "Agricultural water management for drylands in Africa south of the Sahara" International Food Policy Research Institute. Methodology report for the World Bank, 12/21/2013

Posters and Presentations:

Anderson, W.B., Seager, R., Baethgen, W., and Cane, M,: The El Niño Southern Oscillation and sustainable intensification. *The Global Land Program Open Science Meeting*. Oct. 24-27, 2016. Beijing, CHN (oral pres.) *[Awarded outstanding presentation]

Anderson, W.B., Seager, R., Baethgen, W., and Cane, M,: Life cycles of agriculturally-relevant ENSO teleconnections in North and South America. *American Geophysical Union Fall Meeting*. Dec. 14-18, 2015. San Francisco, CA (oral pres.)

Anderson, W.B. "An analysis of methodological and spatial differences in global cropping systems models and maps". Chinese Academy of Agricultural Sciences, May 23rd, 2014. Beijing, China. (oral pres.)

Anderson, W.B. "Assessing the benefits of sustainable land management practices in Bhutan: Land cover changes and hydrological analyses". IFPRI / World Bank hosted Workshop, March 18, 2014. Thimphu, Bhutan. (oral pres.)

Anderson, W.B., You, L., Wood, S., Wood-Sichra, U., Wu, W. "A Comparative Analysis of Global Cropping Systems Models and Maps," *American Geophysical Union Fall Meeting*. Dec. 9-13, 2013. San Francisco, CA (poster pres.)

Anderson, W.B., C. Hain, B. Zaitchik, M. Anderson, C. Alo and M. Yilmaz. "Towards an Integrated Soil Moisture Drought Monitor for East Africa," *American Geophysical Union Fall Meeting*. Dec. 5-9, 2011. San Francisco, CA (poster pres.)

PROFESSIONAL SERVICE

Reviewer: International Journal of Climatology, Hydrology and Earth System Sciences, Earth System Dynamics, PLoS ONE, Journal of Applied Meteorology and Climatology

Graduate Student Committee 2016 - 2017
Department of Earth and Environmental Sciences

Graduate Student Advisory Council Representative, 2015 - 2016
Columbia Graduate School of Arts and Sciences

Workshop Organizer, Thimphu, Bhutan 2014
“Assessing the economic benefits of sustainable land management practices in Bhutan”
50+ participants, including the Honorable Minister of Agriculture and Forests

Panel Organizer, Hoboken, NJ 2013
“Climate change, extreme weather and RMS model methodology”
Broadcast live to over 100 employees participating in the session across the US and Europe

AWARDS AND HONORS

NSF Graduate Research Fellowship (\$98,000) 2014

Columbia Graduate School of Arts and Sciences Dean’s Fellow (\$168,000) 2014

JHU Whiting School of Engineering Dean’s Master’s Fellowship (\$23,000) 2012

JHU Wolman Award for Interdisciplinary Study 2011

Outstanding Student Presentation, GLP Open Science Meeting 2016

TEACHING EXPERIENCE

Teaching Assistant
Columbia University
Regional Climate Dynamics: Dr. Andrew Robertson and Dr. Pietro Ceccato 2016
Dynamics of Climate: Dr. Ron Miller 2017

Johns Hopkins University
Introduction to Environmental Engineering, Dr. Hedy Alavi. 2011

PROGRAMMING AND MODELING LANGUAGES

• Python • C • MATLAB • R • ArcGIS • SQL • STATA

MEDIA COVERAGE

Bhutan Broadcasting Service coverage of our workshop on sustainable land management:
<https://www.dropbox.com/s/8andfilyhn0y463/Land%20Management.mov>

OUTREACH

Volunteer, New York Academy of Sciences after school program 2015
After school science curriculum focused on earth science and natural disasters
Article published by students in the class:
<http://indykids.org/main/2015/12/stronger-storms-in-a-warming-world/>

Volunteer, BioBus. 2014

After school science programming for populations underrepresented in the sciences

Volunteer scientist, Big Green Theater Project,
An annual eco-play writing program for elementary school children

2014