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## Andrew Bell

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### EDUCATION

- 2010      **University of Michigan, Ann Arbor, Michigan, USA**  
PhD in Resource Ecology and Management  
Certificate in Complex Systems
- 2007      **Santa Fe Institute, Santa Fe, New Mexico, USA**  
Complex Systems Summer School
- 2005      **Waseda University, Shinjuku, Tokyo, Japan**  
Masters of Applied Science in Environmental Engineering
- 2002      **University of Waterloo, Waterloo, Ontario, Canada**  
Bachelors of Applied Science in Environmental Engineering (Dean's Honors)

### APPOINTMENTS

- 2021 -      **Boston University**  
Department of Earth & Environment, Assistant Professor
- 2015 - 2021      **New York University**  
Department of Environmental Studies, Assistant Professor
- 2012 - 2014      **International Food Policy Research Institute**  
Environment and Production Technology Division, Research Fellow
- 2012      **International Food Policy Research Institute**  
Environment and Production Technology Division, Post-Doctoral Research Fellow
- 2010 - 2012      **Columbia University**  
The Earth Institute, Post-Doctoral Research Scientist

### PROFESSIONAL SERVICE

- 2021 -      Associate Editor, CABI Agriculture and Bioscience Journal
- 2021 -      Associate Editor, Ecology and Society
- 2017 -      Editorial Board Member, Journal of Social Ecological Systems Modeling
- 2016 -      Board Member, ComSES.Net

### PEER-REVIEWED JOURNAL ARTICLES

#### 2022

- 58      M. Azeem Shah, **Andrew Reid Bell**, and Arif Anwar (2022). Enabling Volumetric Flow Measurement in the Indus Basin Irrigation Scheme: Perceptions and Conflict Reduction. *Water Resources Research* 58(1):e2020WR029464..

#### 2021

- 57 Patrick Ward, Lawrence Mapemba, and **Andrew Reid Bell** (2021). Smart subsidies for sustainable soils: Evidence from a randomized controlled trial in southern Malawi. *Journal of Environmental Economics and Management* 110:102556.
- 56 O. Sarobidy Rakotonarivo, **Andrew Reid Bell**, Brian Dillon, A. Bradley Duthie, Adams Kipchumba, Ranaivo Andriarilala Rasolofoson, Julie Razafimanahaka, and Nils Bunnefeld (2021). Experimental evidence on the impact of payments and property rights on forest user decisions. *Frontiers in Conservation (Accepted)*.
- 55 **Andrew Reid Bell**, Mari Roberts, Kathryn Grace, Alexander Morgan, Md. Ehsanul Haque Tamal, Mary Killilea, and Patrick Ward (2021). How high-frequency food diaries can transform understanding of food security. *Environmental Research Letters* 16:041002.
- 54 Andrew Reid Bell (2021). From Mario Kart to pro-poor environmental governance. *Nature Sustainability* 4:376-378.
- 53 Sarobidy Rakotonarivo, **Andrew Bell**, Katharine Abernethy, Jeroen Minderman, A Duthie, Steve Redpath, Aidan Keane, Henry Travers, Stephanie Bourgeois, Lea-Larissa Moukagni, Jeremy Cusack, Isabel Jones, Rocío Pozo, Nils Bunnefeld. The role of incentive-based instruments and social equity in conservation conflict interventions. *Ecology and Society* 26(8):2.
- 52 **Andrew Reid Bell**, David J Wrathall, Valerie Mueller, Joyce Chen, Michael Oppenheimer, Mathew Hauer, Helen J Adams, Scott Kulp, Peter Clark, Elizabeth Fussell, Nicholas Magliocca, Tingyin Xiao, Elisabeth Gilmore, Kali Abel, Maia Call and Aimée B.A. Slangen (2021). Migration towards Bangladesh coastlines projected to increase with sea-level rise through 2100. *Environmental Research Letters* 16:024045.

## 2020

- 51 S. Rakotonarivo, I. Jones, **A. Bell**, B.A. Duthie, J. Cusack, J. Minderman, J. Hogan, I. Hodgson, N. Bunnefeld (2020). Experimental evidence for conservation conflict interventions: the importance of financial payments, community trust and equity attitude. *People and Nature* 3(1):162-175.
- 50 M. Enenkel, M.E. Brown, J.V. Vogt, J.L. McCarty, **A.R. Bell**, D. Guha-Sapir, W. Dorigo, K. Vasilaky, M. Svoboda, R. Bonifacio, M. Anderson, C. Funk, D. Osgood, C. Hain, and P. Vinck (2020). Why predict climate hazards if we need to understand impacts? Putting humans back into the drought equation. *Climatic Change* 162:1161-1176.

## 2019

- 49 D. Kanter, **A. Bell**, S. McDermid (2019). Precision Agriculture for Smallholder Nitrogen Management. *One Earth* 1(3):281-284.
- 48 D.J. Wrathall, V. Mueller, P.U. Clark, **A. Bell**, M. Oppenheimer, M. Hauer, S. Kulp, E. Gilmore, H. Adams, R. Kopp, K. Abel, M. Call, J. Chen, A. deSherbinin, E. Fussell, C. Hay, B. Jones, N. Magliocca, E. Marino, A. Slangen, and K. Warner (2019). Sea-level change, human migration and the intervening influence of policy. *Nature Climate Change* 9:898-901.

- 47 **Andrew Bell**, Patrick S. Ward, Muhammad Ashfaq, and Steve Davies (2019). Valuation and aspirations for drip irrigation in Punjab, Pakistan. *Journal of Water Resources Planning and Management* 146(6):04020035.
- 46 Helen Adams, **Andrew Bell**, and Md. Ehsanul Haque Tamal (2019). Temporal dimensions of reported life satisfaction in a low-income, agricultural environment. *Ecology and Society* 24(4):29.
- 45 Md. Ehsanul Haque Tamal, **Andrew Bell**, Patrick Ward, and Mary Killilea (2019). Social dynamics of short term variability in key measures of household and community wellbeing in Bangladesh. *Scientific Data* 6:125.
- 44 **Andrew Bell**, Patrick Ward, Md. Ehsanul Haque Tamal, and Mary Killilea (2019). Assessing recall bias and measurement error in high-frequency social data collection for human-environment research. *Population and Environment* 40(3):325-345.
- 43 **Andrew Bell**, Carlos Calvo-Hernandez, and Michael Oppenheimer (2019). Migration, Intensification, and Diversification as Adaptive Strategies (MIDAS). *Socio-Environmental Systems Modeling* 1:1.
- 2018**
- 42 Wenchao Xu, Man Li, and **Andrew Bell** (2018). Water Security and Irrigation Investment: Evidence from a Field Experiment in Rural Pakistan. *Applied Economics* 51(7):711-721.
- 41 **Andrew Bell**, Patrick S. Ward, Lawrence Mapemba, Zephania Nyirenda, Wupe Msukwa & Edwin Kenamu (2018). Smart subsidies for catchment conservation in Malawi. *Scientific Data* 5:180113.
- 40 **Andrew Bell**, Tim G. Benton, Klaus Droppelmann, Lawrence Mapemba, and Patrick S. Ward (2018). Transformative Change through Payments for Ecosystem Services (PES): a conceptual framework and application to conservation agriculture in Malawi. *Global Sustainability* 1:e4.
- 39 **Andrew Bell**, Jennifer Zavaleta, Frazer Mataya, and Patrick S. Ward (2018). Do as they did: Peer effects explain adoption of conservation agriculture in Malawi. *Water* 10:51.
- 38 Patrick Ward, **Andrew Bell**, Klaus Droppelmann, and Tim Benton (2018). Early adoption of conservation agriculture practices: Understanding partial compliance in programs with multiple adoption decisions. *Land Use Policy* 70: 27-37.
- 2017**
- 37 Elizabeth Bryan, **Andrew Bell**, Claudia Ringler, and Akhter Ahmed (2017). Increasing the Benefits to Small Producers from Crop Production in Bangladesh. *Asian Journal of Agriculture and Development* 15(1):1-21.
- 36 **Andrew Bell** (2017). Informing decisions in agent-based models: A mobile update. *Environmental Modeling and Software* 93:310-321.  
doi:10.1016/j.envsoft.2017.03.028

**2016**

- 35 **Andrew Bell** and Wei Zhang (2016). Payments discourage coordination in ecosystems services provision: Evidence from behavioral experiments in Southeast Asia. *Environmental Research Letters* 11(11):114024
- 34 **Andrew Bell**, Patrick Ward, Mary Killilea, and Md. Tamal Ensinul Haque (2016). Real-Time Social Data Collection in Rural Bangladesh via a 'Microtasks for Micropayments' Platform on Android Smartphones. *PLOS One* 11(11):e0165924
- 33 Azeem Shah, Arif Anwar, **Andrew Bell**, and Zia ul Haq (2016). Equity in a tertiary canal of the Indus Basin Irrigation System (IBIS). *Agricultural Water Management* 178:201-214
- 32 **Andrew Bell**, Patrick Ward, and Azeem Shah (2016). Increased water charges improve efficiency and equity in an irrigation system. *Ecology and Society* 21(3):23
- 31 **Andrew Bell**, Gregory Parkhurst, Klaus Droppelmann, and Tim Benton (2016). Scaling up pro-environmental agricultural practice using agglomeration payments: proof of concept from an agent-based model. *Ecological Economics* 126:32-41
- 30 Patrick Ward, **Andrew Bell**, Klaus Droppelmann, Lawrence Mapemba, and Gregory Parkhurst (2016). Heterogeneous preferences and the effects of incentives in promoting conservation agriculture in Malawi. *Agriculture, Ecosystems, and the Environment* 222:67-79.
- 29 **Andrew Bell**, Wei Zhang, and Keosothea Nou (2016). Pesticide use and cooperative management of natural enemy habitat in a framed field experiment. *Agricultural Systems* 143:1:13.
- 28 **Andrew Bell**, Nathaniel Matthews, and Wei Zhang (2016). Opportunities for improved promotion of ecosystem services in agriculture under the WEF Nexus. *Journal of Environmental Studies and Sciences* 6(1):183-191.
- 27 Quinn Bernier, Parvin Sultana, **Andrew Bell**, and Claudia Ringler (2016). Water management and livelihood choices in Southwestern Bangladesh. *Journal of Rural Studies* 45:134-145.
- 26 Jill L. Caviglia-Harris, Erin Sills, **Andrew Bell**, Daniel Harris, Katrina Mullan, and Dar Roberts (2016). Busting the Boom-Bust Pattern of Development in the Brazilian Amazon. *World Development* 79:82-96.
- 2015**
- 25 **Andrew Bell**, Derek Robinson, Ammar Malik, and Snigdha Dewal (2015). Modular ABM development for improved dissemination and training. *Environmental Modeling and Software* 73:189–200. doi:10.1016/j.envsoft.2015.07.016
- 24 **Andrew Bell**, Elizabeth Bryan, Claudia Ringler, and Akhter Ahmed (2015). Land Use Policy Rice productivity in Bangladesh : What are the benefits of irrigation? *Land Use Policy* 48:1–12.
- 23 **Andrew Bell**, M. Azeem Shah, Arif Anwar, and Claudia Ringler (2015). What role can information play in improved equity in Pakistan's irrigation system? Evidence from an experimental game in Punjab. *Ecology and Society* 20(1): 51.
- 22 **Andrew Bell**, Jill Caviglia-Harris, and Anthony Cak (2015). Characterizing Land-Use Change over Space and Time: Applying Principal Components Analysis in the Brazilian Legal Amazon. *Land Use Science* 10(1):19-37.

**2014**

- 21 **Andrew Bell**, M. Azeem Shah, and Patrick Ward (2014). Reimagining cost recovery in Pakistan's irrigation system through willingness-to-pay estimates for irrigation water from a discrete choice experiment. *Water Resources Research* 50(8):6679-6695.
- 20 Jill Caviglia-Harris, Michael Toomey, Daniel Harris, Katrina Mullan, **Andrew Bell**, Erin Sills, and Dar Roberts (2014). Detecting and interpreting secondary forest on an old Amazonian Frontier. *Journal of Land Use Science* 10(4):442-465.
- 19 **Andrew Bell**, Tingju Zhu, Hua Xie, and Claudia Ringler (2014). Climate-Water Interactions – Challenges for Improved Representation in Integrated Assessment Models. *Energy Economics* 46:510-521.
- 2013**
- 18 **Andrew Bell**, Noora-Lisa Aberman, Fatima Zaidi, and Benjamin Wielgosz (2013). Progress of Constitutional Change and Irrigation Management Transfer in Pakistan: Insights from a Net-Mapping Exercise. *Water International* 38(5):515-535.
- 17 **Andrew Bell**, Daniel Osgood, Benjamin Cook, Kevin Anchukaitis, Geoffrey McCarney, Arthur Greene, Brendan Buckley, and Edward Cook (2013). Paleoclimate histories improve access to index insurance. *Global Environmental Change* 23:4 774-781.
- 16 Tanya Heikkila, Andrea Gerlak, **Andrew Bell**, and Susanne Schmeier (2013). Adaptation by a river basin organization: three cases of trigger and adaptive response within the Mekong River Commission. *Environmental Science and Policy* 25:73-82.
- 2012**
- 15 N. Pederson, **A. Bell**, E. Cook, U. Lall, N. Devineni, R. Seager, K. Eggeston, and K. Vranes (2012). Is an epic pluvial masking the water insecurity of the greater New York City region? *Journal of Climate* 326:1339-1354, doi:10.1175/JCLI-D-11-00723.1.
- 14 Benjamin Cook, **Andrew Bell**, and Kevin Anchukaitis (2012). Snow and precipitation impacts on dry season streamflow in the Lower Mekong Basin. *Journal of Geophysical Research – Atmospheres* 117:D16116, doi:10.1029/2012JD017708.
- 13 N. Pederson, C. Leland, B. Nachin, A.E. Hessler, **A.R. Bell**, D. Martin-Benito, T. Saladyga, B. Suran, P.M. Brown, and N. Davi (2012). Three Centuries of Shifting Hydroclimatic Regimes Across the Mongolian Breadbasket. *Journal of Agricultural and Forest Meteorology* 178-179:10-20, doi:10.1016/j.agrformet.2012.07.003.
- 12 N. Pederson, **A. Bell**, T. Knight, C. Leland, N. Malcomb, K. Anchukaitis, K. Tackett, J. Scheff, A. Brice, B. Catron, W. Blozan, and J. Riddle. A long-term perspective on a modern drought in the American Southeast. *Environmental Research Letters* 7(1): 014034.
- 11 **Andrew Bell**, Rick Riolo, Jacqueline Doremus, Dan Brown, Tom Lyon, John Vandermeer, and Arun Agrawal (2012). Fragmenting forests: The double edge of effective forest monitoring. *Environmental Science and Policy* 16: 20-30.

- 10 Ethan Schoolman, Jeremy Guest, Kathleen Bush, and **Andrew Bell** (2012). Framing Sustainability: An Empirical Analysis of the Sources of Sustainability Research. *Sustainability Science* 7(1): 67-80.

### 2011

- 9 **Andrew Bell** (2011). Productivity and farm size in Rondônia: Implications for Environmental Licensing. *Ecology and Society* 16(2):7.
- 8 **Andrew Bell**, Benjamin Cook, Kevin Anchukaitis, Brendan Buckley, and Edward Cook (2011). Repurposing climate reconstructions for drought prediction in Southeast Asia. *Climatic Change* 106:691-698.
- 7 **Andrew Bell**, Nathan Engle, Maria Carmen Lemos (2011). How does diversity Matter? The case of Brazilian River Basin Councils. *Ecology and Society* 16(1):42.
- 6 **Andrew Bell** (2011). The Plundered Planet: How to Reconcile Prosperity with Nature (Invited Book Review). *Natural Resources Forum* 35(4):343-344.
- 5 **Andrew Bell** (2011). Environmental Licensing and Rural Exodus: An agent-based approach to understanding ranching and land use in rural Rondônia. *Ecology and Society* 16(1):31.

### 2010

- 4 **Andrew Bell**, Maria Carmen Lemos, Donald Scavia (2010). Cattle, Clean Water, and Climate Change: Policy Choices for the Brazilian Agricultural Frontier. *Environmental Science and Technology* 44:8377-8384.
- 3 Maria Carmen Lemos, **Andrew Bell**, Nathan Engle, Rosa Maria Formiga-Johnsson, Donald Nelson (2010). Technical Knowledge and Water Resources Management: A comparative Study of River Basin Councils, Brazil. *Water Resources Research* 46, W06523, doi:10.1029/2009WR007949.

### 2008

- 2 **Andrew Bell** (2008). The Future of Everything: The Science of Prediction (Book Review). *Ecological Complexity* 5:69-70.

### 2005

- 1 **Andrew Bell**, Akihiko Terada, Yoshiteru Aoi, Satoshi Tsuneda, Akira Hirata (2005). Comparison of Spatial Organization in Top-down- and Membrane-aerated Biofilms: A Numerical Study. *Water Science and Technology* 52(7):173-180.

### PEER-REVIEWED BOOK CHAPTERS

- 2019 Nathaniel Matthews, Wei Zhang, **Andrew Bell**, and Lara Treemore-Spears. Ecosystems and Ecosystem Services. In Saundry, P. and Ruddell, B. (Eds.) *The Food-Energy-Water Nexus*, Chapter 9. Springer. (Forthcoming)

- 2015 G. Villamor, P. Afiavi Dah-gbeto, **A. Bell**, U. Pradhan, and M. van Noordwijk. Gender-specific spatial perspectives and scenario building approaches for understanding gender equity and sustainability in climate-smart landscapes. In Minang, P.A., van Noordwijk, M., Freeman, O.E., Mbow, C., de Leeuw, J. and Catacutan, D. (Eds.) *Climate-Smart Landscapes: Multifunctionality in Practice*, Chapter 15, p. 211 -225. Nairobi, Kenya: World Agroforestry Centre (ICRAF).

## PROPOSALS FUNDED

2020 - 2023	Economic and Social Research Council (ESRC) of the UK - Global Challenge Research Fund, for project "Scaling up Off-Grid Sanitation. CoI, with Lead PI Alison Parker (Cranfield University) and 9 additional CoIs (NYU Budget £42,000).	£1,962,897
2020	Water, Land and Ecosystems Program (WLE) of CGIAR: "Games for collective action and adaptation in Ethiopian Pastoral Systems." <u>CoPI Andrew Bell</u> , with IFPRI Lead PI Wei Zhang.	\$120,000
2020 - 2025	Feed the Future Innovation Lab for Markets, Risk, and Resilience (USAID/UC Davis): "Empowering local decision making in collective incentives for improved land management in Malawi." <u>Lead PI Andrew Bell</u> , with CoPIs Lawrence Mapemba (LUANAR), Mark Buntaine (UCSB), and Alex Pfaff (Duke).	\$750,000
2020 - 2025	Global Convergence Research (GCR) program of the NSF: "Collaborative Research: Disentangling Environmental Change and Social Factors as Drivers of Migration." CoPI, with NYU Lead PI Sonali McDermid. Collaborative research with Columbia University, led by Richard Seager (NYU Budget \$910,678)	\$3,581,807
2019	International Water Management Institute (IWMI), for analysis of water governance and water sector reform in Punjab and Khyber Pakhtunkhwa, Pakistan.	\$30,000
2019 - 2023	Coupled Natural Human Systems (CNH) Program of the NSF, for project "Land-Climate-Water Feedbacks and Farmer Decision-Making in an Agricultural System." CoPI, with Lead PI Katrina Mullan (Montana), coPI Jill Caviglia-Harris (Salisbury), and coPIs Trent Biggs and Fernando De Sales (San Diego State).	\$1,450,000
2018 - 2020	Economic and Social Research Council (ESRC) of the UK Transformative Research Program, for project "MobileES – Using mobile-phone technology to capture ecosystem service information." CoPI, with Lead PI Simon Willcock (Bangor).	£250,000
2015 - 2016	International Food Policy Research Institute (IFPRI) Pakistan Strategy Support Program – Support to irrigation water supply research	\$50,000

2014 - 2017	Cereal Systems Initiative for South Asia (CSISA) Program, for project “Crowdsourcing Rural Data via Android in Bangladesh.” Lead PI, with coPIs Patrick Ward (IFPRI) and Mary Killilea (NYU).	\$275,000
2014 - 2018	BASIS Access and Market Access Innovation Lab, for project “Smart Subsidies to Promote Peer Monitoring of Conservation Agriculture Compliance in Malawi.” Lead PI with coPIs Tim Benton (Leeds), Patrick Ward (IFPRI), Greg Parkhurst (Weber State) and Lawrence Mapemba (Lilongwe University of Agriculture and Natural Resources; LUANAR).	\$772,000
2013 - 2016	Ecosystem Services for Poverty Alleviation (ESPA) Program (UK), for project “Agglomeration Payments for Catchment Conservation in the Shire Valley.” Lead PI with Lead PI Claudia Ringler (IFPRI), coPIs Tim Benton (Leeds), Patrick Ward (IFPRI), Greg Parkhurst (Weber State) and Lawrence Mapemba (LUANAR).	\$662,000
2013 - 2015	Water, Land and Ecosystems Program of the Consultative Group for International Agricultural Research (CGIAR), for project “Mobile Agent-based Ecosystem Services in China and Southeast Asia.” Lead PI, with Lead PI Wei Zhang (IFPRI), coPI Wopke van der Werf and Felix Bianchi (Wageningen University)	\$601,700
2012 - 2014	3ie, for project “Impact of Creative Capacity Building of local innovators and communities on income, welfare and attitudes in Uganda. A cluster randomized control trial approach” (Col) (Collaboration with Makerere University of Uganda)	\$746,000

#### **SELECTED AWARDS AND FELLOWSHIPS**

2011	Climate Center, Columbia University, for project “Mapping climate information demand in Vietnam”	\$7,300
2009	Rackham Predoctoral Fellowship, University of Michigan	\$27,000
2009	Rackham International Research Fellowship, University of Michigan	\$7,500
2007	International Institute Research Fellowship, University of Michigan	\$2,000
2006	Graham Environmental Sustainability Fellowship, University of Michigan	\$50,000
2006	Daimler-Chrysler Fellowship in Sustainable Systems, Center for Sustainable Systems, University of Michigan	\$10,000
2005	Natural Sciences and Engineering Research Council PGS D Scholarship	\$63,000
2002	Natural Sciences and Engineering Research Council PGS A Scholarship	\$34,600
2002	Japan Ministry of Education, Culture, Sports, Science and Technology (Monbukagakusho) Graduate Fellowship 2002	¥5,415,000

#### **INVITED TALKS**



- 2021 **Andrew Bell.** From Mario Kart to pro-poor Environmental Governance. Departmental Seminar Series, San Diego State University Department of Geography, February 2021.
- 2021 **Andrew Bell.** Water Governance and the Indus Basin Irrigation System. Keynote presentation at Pakistan Water Conference 2021 - Charting our future to a water secure Pakistan, Lahore, Pakistan, February 2021.
- 2021 **Andrew Bell.** From Mario Kart to pro-poor Environmental Governance. Departmental Seminar Series, University of Colorado - Boulder Department of Environmental Studies, January 2021.
- 2019 **Andrew Bell.** Modular ABM for Integration. Invited presentation at workshop hosted by James Hutton Institute, Aberdeen, UK, November 2019.
- 2018 **Andrew Bell.** High-frequency Rural Data Collection via Android in Bangladesh. Invited seminar hosted by USDA Economic Research Service, Washington, DC, June 2018.
- 2017 **Andrew Bell, Patrick Ward, Steven Davies, and Muhammad Ashfaq.** Steps forward for drip irrigation in Pakistan. Invited seminar hosted by Punjab Department of Agriculture, Lahore, Pakistan, July 2017.
- 2016 **Andrew Bell.** Mobile tools for informing ABM. SESYNC Seminar Series, Annapolis, Maryland, Nov 2016.
- 2016 **Andrew Bell.** Informing decisions in agent-based models (a mobile update). International Congress on Environmental Modeling and Software, Toulouse, France, July 2016.
- 2016 **Andrew Bell.** How can we kickstart sharing in ABM development? International Congress on Environmental Modeling and Software, Toulouse, France, July 2016.
- 2015 **Andrew Bell, Derek Robinson, Ammar Malik, and Snigdha Dewal.** Modular ABM in NRM for improved dissemination and teaching. Conference on Complex Systems, Tempe, Arizona, October 2015.
- 2014 **Andrew Bell, Greg Parkhurst, Klaus Droppelmann, Lawrence Mapemba, Tim Benton, and Paswel Marenya.** Smart Subsidies for Catchment Conservation in Malawi. Shire River Basin Management Program 2<sup>nd</sup> Meeting, Blantyre, Malawi, November 2014.
- 2014 **Andrew Bell.** The People Side of Food Security. Weber State University Food Matters Series, Ogden, Utah, October 2014.
- 2014 **Andrew Bell, Ammar Malik, and Snigdha Dewal.** The MAS Genome and Modular MAS Publication. Helmholtz Center for Environmental Research (UFZ), Leipzig, Germany, May 2014.
- 2014 **Andrew Bell, Azeem Ali Shah, and Patrick Ward.** Reimagining Cost Recovery in Pakistan's Irrigation System. University of Agriculture – Faisalabad, Faisalabad, Pakistan, April 2014.
- 2013 **Andrew Bell, Ammar Malik, and Snigdha Dewal.** The MAS Genome and Modular MAS Publication. Tansley Working Group 1, Imperial College London, UK, September 2013.
- 2013 **Andrew Bell.** Investigating Irrigation in South Asia and Sub-Saharan Africa: IFPRI Water Policy Research. Tap Project for World Water Day, UNICEF – Georgetown University, Washington, DC, March 2013.
- 2012 **Andrew Bell.** Implications of Water Scarcity on Global Agricultural Production. Soy and Grain Trade Summit, New Orleans, Louisiana, September 2012.

- 2011 **Andrew Bell.** Environmental Licensing and the Smallholder (Invited Short Paper). Association of American Geographers Annual Meeting, Seattle, USA, April 2011.
- 2007 **Andrew Bell.** O Uso de Modelos na Gestão dos Recursos Naturais e a Aplicação de Modelos Multiagentes no Plano de Recursos Hídricos para a Região Amazônica. Invited Speaker, 2<sup>nd</sup> Annual Meeting in Geomatics of the State University of Rio de Janeiro, Rio de Janeiro, December 4, 2007.

### CONFERENCE PROCEEDINGS

- 2013 **Andrew Bell,** Azeem Ali Shah, Arif Anwar, and Claudia Ringler. Experimental Games in Pakistan's Irrigation Sector. International Association for the Study of the Commons Biannual Meeting, Kitafuji, Japan, May 2013.
- 2012 **Andrew Bell,** Paswel Marenya. Groupons for conservation: a proof of concept for agglomeration payments in agricultural programs. CAPRI/CCAFS International Research Workshop on Institutions for Inclusive Climate-Smart Agriculture, Nairobi, Kenya, September 2012.
- 2011 Tanya Heikkila, Andrea K. Gerlak, **Andrew Bell,** and Susanne Schmeier. Adaptation by a river basin organization: three cases of trigger and adaptive response within the Mekong River Commission. Proceedings of the Colorado Conference on Earth System Governance, May 2011.
- 2011 **Andrew R Bell,** Benjamin I Cook, Kevin J Anchukaitis, Brendan M Buckley, Edward R Cook. Climate prediction in Southeast Asia: what we can know, and what we need to know. Proceedings of the Initiative on Climate Adaptation Research and Understanding through the Social Sciences (ICARUS), May 2011.
- 2009 **Andrew Bell,** Thiago Emanuel Possmoser, Margarida Marchetto. Os desafios para implementação dos comitês de bacia na Região Amazônica: Estudo de caso na Bacia do Rio Machado/RO. Proceedings of the 18th Biannual Brazilian Symposium on Water Resources, November 2009.
- 2009 João Paulo Papaleo Costa Moreira, Emerson Andrade de Souza, Leonardo Rosa Andrade, **Andrew Bell,** Margarida Marchetto. A pecuária extensiva e os impactos ambientais na Bacia do Rio Machado - Região Amazônica. Proceedings of the 18th Biannual Brazilian Symposium on Water Resources, November 2009.
- 2009 Carina Stre Holanda, Ingrid Alexandrina Veronez Martins, Mônica Chagas Cerqueira, **Andrew Bell,** Margarida Marchetto. Atividades agropastoris na Região Amazônica e seus impactos sobre os recursos hídricos. Proceedings of the 18th Biannual Brazilian Symposium on Water Resources, November 2009.
- 2007 Simon Angus, **Andrew Bell,** Paul Hooper, Elizabeth Mullane. A new approach to modeling social institutions using artificial neural networks. Proceedings of the 2007 Complex Systems Summer School, The Santa Fe Institute.
- 2007 **Andrew Bell,** Daniel Neilson. Limits of prediction in modeling social systems. Proceedings of the 2007 Complex Systems Summer School, The Santa Fe Institute.
- 2004 Ryuushi Moriya, **Andrew Bell,** Yoshiteru Aoi, Satoshi Tsuneda, Akira Hirata. Analysis of Population Dynamics in Wastewater Biofilms using a Cellular Automaton-based Model. Proceedings of the Society of Chemical Engineers in Japan, 69th Annual Meeting, April 2004.

### OTHER PRESENTATIONS

- 2018 **Andrew Bell.** Migration, Adaptation and Diversification as Adaptive Strategies (MIDAS): New insights into migration, and new data needs. Migration, Environnement et Climat: quelles inégalités face aux risques. INED, Paris, France, October 2018.
- 2018 **Andrew Bell.** Migration, Adaptation and Diversification as Adaptive Strategies (MIDAS). International Congress on Environmental Modelling and Software, Fort Collins, Colorado, June 2018.
- 2017 **Andrew Bell.** Mobile tools and Agent-based Models. ABM 17, San Diego, California, April 2017.
- 2016 **Andrew Bell, Patrick Ward, Klaus Droppelmann, and Lawrence Mapemba.** Challenges in attributing poverty alleviation to ecosystem services provision. ESP Africa Meeting, Nairobi, Kenya, November 2016.
- 2016 **Andrew Bell, Patrick Ward, Klaus Droppelmann, and Lawrence Mapemba.** Costs of avoided sediment loading in the Shire River Basin. ESP Africa Meeting, Nairobi, Kenya, November 2016.
- 2016 **Andrew Bell and Wei Zhang.** Promoting insect-based ecosystem services in smallholder landscapes. AESS Annual meeting, Washington, DC, June 2016.
- 2014 **Andrew Bell.** Informing Agent-based Models with social data for ecosystem services questions. ESPA Social Surveys Meeting, London, UK, October 2014.
- 2012 Tingju Zhu, Claudia Ringler, Tim Sulser, **Andrew Bell,** and Mohsin Iqbal. Climate change impacts on water and food in Pakistan and options for adaptation. Pakistan Strategy Support Program Annual Conference, Islamabad, Pakistan, December 2012.
- 2011 **Andrew Bell, Benjamin Cook, Kevin Anchukaitis, Brendan Buckley, and Edward Cook.** Predicting drought with tree-ring climate reconstructions in Southeast Asia. Association of American Geographers Annual Meeting, Seattle, USA, April 2011.
- 2011 Brendan M. Buckley, **Andrew Bell,** Kevin Anchukaitis, Edward Cook, Roland Fletcher, Dan Penny, Masaki Sano, Aroonrut Wichienkeo, Victor Lieberman, Mai Hong Truong, and Nam Le Canh. The Societal Impact of Southeast Asian Hydroclimate Variability Over the Past Millennium. AGU 2011 Chapman Conference on Climates, Past Landscapes, and Civilizations, Santa Fe, USA, May 2011.
- 2010 Andrew Bell. Climate Change and licensing in Rondônia: fueling a rural exodus? Association of American Geographers Annual Meeting, Washington DC, USA, April 2010.
- 2009 **Andrew Bell.** Climate-proofing Cambodia's Agricultural Development: A systems look at the net gains from agricultural intensification and diversification. 2009 Development Research Forum, Symposium on "The Contribution of Research to National Development Strategies and Policies." Phnom Penh, Cambodia, September 2009.
- 2009 Maria Carmen Lemos, **Andrew Bell,** Nathan Engle, Rosa Formiga-Johnsson, Donald Nelson. Technical Knowledge and democratic decision-making: building adaptive capacity of freshwater systems in Brazil. IOP Conf. Series: Earth and Environmental Science **6** (2009) 292015.
- 2008 **Andrew Bell.** Adaptive Governance of Water in the Brazilian Amazon: Step one – Could climate change help the Amazon? Alliance for Global Sustainability Annual Meeting 2008, MIT, Boston, USA, January 2008.

- 2003 **Andrew Bell.** Simulation of Competition in [Ammonia-oxidizing Bacteria] in Biofilms using a Pseudo-3D [Cellular Automaton]-Hybrid Model. Biofilms 2003, American Society for Microbiology, November 2003.

## TEACHING EXPERIENCE

- 2019 **National Academy of Sciences PEER Program for Central Asia – Introduction to Social Data Collection with Open Data Kit (ODK)**
- 2015- **NYU Department of Environmental Studies – ENVST-UA 100 (Environmental Systems Science); ENVST-UA 350 (Energy Generation and the Environment); ENVST-UA 300 (Introduction to Environmental Modeling)**
- NYU Abu Dhabi – CCOL-AD 30 (Water: Rights and Resources)**
- NYU Prison Education Program – ENVST-UA 100 (Environmental Systems Science)**
- 2013 **Pakistan Strategy Support Program, IFPRI – Introduction to Systems Dynamics and Agent-based Modeling**
- 2008 **University of Michigan (Graduate Student Instructor) – Modeling Coupled Human-Natural Systems**
- 2006 - **University of Michigan (Graduate Student Instructor) – Integrated Environmental Assessment**  
2008

## UNIVERSITY SERVICE

- 2016 - Chair, Student Disciplinary Committee, College of Arts and Sciences, New York  
2019 University
- Admissions Committee, Steering Committee, and Instructor; Prison Education Program, New York University
- 2015 Undergraduate Curriculum Committee, Department of Environmental Studies, New York University
- 2013 Standing Search Committee, Development Strategy and Governance Division, IFPRI

- 2008 - Reviewer for Ecology and Society; Environmental Management; Environment and Resource Economics; Environmental Modeling and Software; Ecological Economics; Sustainability; Environmental Conservation; International Journal of Sustainable Development and World Ecology; Journal of International Development; International Journal of Geographic Information Science; Sustainability Science, Food Security, Environmental Development, NSF Geography Program, NSF INFEWS Program
- 2008 Promotions and Tenure Committee, School of Natural Resources and Environment. Graduate Student Representative.