

Todd Bendor

CONTACT INFORMATION

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EDUCATION

- Ph.D. in Regional Planning** May 13, 2007
University of Illinois at Urbana-Champaign (UIUC), Champaign, IL
- Dissertation topic: *Redistribution Effects of Wetland Mitigation over Space and Time.*
 - Committee: Varkki Pallathucheril (Chair), Bruce Hannon, Nick Brozovic, and David Kovacic.
 - Earned Center for Teaching Excellence 'Graduate Teaching Certificate.'
- 2004 Santa Fe Institute Complex Systems Summer School** July 2004
- Selected to enroll in course and project work at highly selective complexity workshop.
 - Created agent-based model of land-use change and climate interaction.
- M.S. in Environmental Science** August 11, 2003
Washington State University (WSU), Pullman, WA
- Thesis topic: *Simulating Scrappage and Feebate Programs for Reduced Automobile Emissions.*
 - Advisor: Andrew Ford.
- B.S. in System Dynamics (Distinction)** May 18, 2002
Worcester Polytechnic Institute (WPI), Worcester, MA
- Senior thesis: *The System Dynamics of Automobile Fuel Economy.* Advisor: Jim Lyneis.
 - Junior thesis: *Risk Amplification of GMOs in Europe* (Completed in Basel/Zurich, Switzerland). Advisor: Wesley Jamison.
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PROFESSIONAL EXPERIENCE

- Assistant (2007-2013)/Associate (2013-2018)/ Professor (2018-)** 2007 - Present
Department of City and Regional Planning, University of North Carolina at Chapel Hill
- Director, Odum Institute for Research in Social Science (2018-Present)
 - Faculty Fellow: Center for Urban and Regional Studies (CURS)
 - Faculty Member of UNC Curriculum in Ecology and the Environment
- Honorary Visiting Professor** Fall 2016
Center for Advanced Spatial Analysis, University College-London, London, UK
- 2012 Frederick J. Clarke Fellow** Spring 2012
Institute for Water Resources, U.S. Army Corps of Engineers, Alexandria, VA
- Visiting Scholar** Spring 2012
Department of Urban Studies and Planning, Massachusetts Institute of Technology, Cambridge, MA
- Visiting Professor** Fall 2011
Géographie-cités (CNRS Research Project), Institut de Géographie, Université Paris 1 (Panthéon-Sorbonne), Paris, France
- Post-Doctoral Research Associate** August 2007 – August 2008
Land Use Evolution and Impact Assessment Modeling Lab (LEAM), UIUC
- Collaborative work on urban land use modeling and environmental impact assessment
- Research Assistant** August 2003 – June 2007
Land Use Evolution and Impact Assessment Modeling (LEAM) Laboratory, Urban and Regional Planning, UIUC
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- Renewable Energy in Illinois Project, *Program in Arms Control and Disarmament, and International Security, UIUC*
- Regional Economics and Policy (REAP) Laboratory, *Agricultural Economics Department, UIUC*

Instructor <i>Analytical Planning Research Methods (Urban Planning 116), UIUC</i>	January 2006 – May 2006
Teaching Assistant <i>Spatial Ecosystem Modeling (Geography/Natural Resources 469), UIUC</i>	Spring 2005, Spring 2006
Research Assistant <i>Program in Environmental Science and Regional Planning, WSU</i>	August 2002 – June 2003

HONORS

- UNC Center for Urban and Regional Studies (CURS) Scholar in Residence (Fall 2017)
- Outstanding Summer Course Award, Huazhong Agricultural University, Wuhan, China (Summer 2014)
- Frederick J. Clarke Scholar – Institute of Water Resources, U.S. Army Corps of Engineers (Spring 2012)
- Lone Mountain Fellow – Property and Environment Research Center (July, 2010)
- Sigma Xi National Scientific Research Society (Full Member, Elected 2009)
- GlaxoSmithKline Faculty Fellow – Institute for Emerging Issues, N.C. State University (2009)
- Outstanding Ph.D. Award, UIUC Department of Urban and Regional Planning (May 2007)
- Dana Meadows Award, Best student paper presented at 2005 International System Dynamics Society Conference
- University of Illinois Conference Travel Award: Omaha, Nebraska (May, 2004), Fort Worth, TX (Nov., 2006)
- Philip Abelson Fellowship, Washington State University (2003)
- Edward R. Meyer Scholarship, Washington State University (2003)
- Institute Scholarship, Worcester Polytechnic Institute (2000-2002)
- Admitted to WPI Zurich Project Center to complete junior thesis (2001)
- Member of Phi Theta Kappa, international two-year honor society (1997)

BIBLIOGRAPHY

Books

BenDor, Todd K. and Jürgen Scheffran. 2019. *Agent-Based Modeling of Environmental Conflict and Cooperation*. Boca Raton, FL: CRC Press.

Refereed Articles (* Denotes Student Author)

58. Douglas A. Shoemaker, Todd K. BenDor, and Ross K. Meentemeyer. Integrating Urbanization and Ecosystem Service Models to Explore Alternative Regional Futures. *Computers, Environment, and Urban Systems (In Press)*.
57. Eleanor J. Sterling, Moira Zellner, Kirsten Leong, Karen E. Jenni, Steven Gray, Rebecca Jordan, Todd K. BenDor, Antonie J. Jetter, Laura Schmitt Olabisi, Michael Paolisso, Klaus Hubacek, Pierre Bommel, and Gabriele Bammer. Try, try again: Lessons learned from success and failure in participatory modeling. *Elementa Sustainability Transitions (In Press)*.
56. Andrew H. Whittemore and Todd K. BenDor. Reassessing NIMBY: The demographics, politics, and geography of opposition to high-density residential infill. *Journal of Urban Affairs (In Press)*.
55. Andrew H. Whittemore and Todd K. BenDor. Rhetorical Framing in Planning: An Empirical Investigation of How Planners Discuss Density. *Journal of Planning Education and Research (In Press)*.
54. Andrew H. Whittemore and Todd K. BenDor. 2018. Exploring the Acceptability of Densification: How Positive Framing and Source Credibility Can Change Attitudes. *Urban Affairs Review (In Press)*.
53. Alexey Voinov, Karen Jenni, Steven Gray, Nagesh Kolagani, Pierre D. Glynn, Pierre Bommel, Christina Prell, Moira Zellner, Eleanor Sterling, Michael Paolisso, Laura Schmitt Olabisi, Philippe J. Giabbanelli, Zhanli Sun, Christophe Le Page, Sondoss Elsworth, Todd K. BenDor, Klaus Hubacek, Bethany K. Laursen, Alison Singer, Jessica Brunacini, Laura Young. Tools and methods in participatory modeling: selecting the right tool for the job. *Environmental Modelling and Software* 109: 232-255.
52. Jordan, Rebecca, Steven Gray, Moira Zellner, Pierre D. Glynn, Alexey Voinov, Beatrice Hedelin, Eleanor J. Sterling, Kirsten Leong, Laura Schmitt Olabisi, Klaus Hubacek, Pierre Bommel, Todd K. BenDor, Antonie J. Jetter, Bethany

- Laursen, Alison Singer, Philippe J. Giabbanelli, Nagesh Kolagani, Laura Basco Carrera, Karen Jenni, and Christina Prell. 2018. "Twelve Questions for the Participatory Modeling Community." *Earth's Future* 6(8)-1046-1057.
51. Bhattachan, Abinash, Ryan Emmanuel, Todd K. BenDor, and Marcelo Ardon-Sayao. 2018. Evaluating the effects of land-use change and future climate change on vulnerability of coastal landscapes to saltwater intrusion. *Elementa: Science of the Anthropocene* 6:62.
50. Woodruff, Sierra, Todd K. BenDor, and Aaron Strong. Fighting the inevitable: infrastructure investment and coastal community adaptation to sea level rise. *System Dynamics Review* 34(1-2): 48-77.
49. BenDor, Todd K., Vivek Shandas, Brian Miles, Kenneth Belt, and Lydia Olander. 2018. Ecosystem Services and U.S. Stormwater Management: An Agenda for Improving Urban Stormwater Decisions. *Environmental Science and Policy* 88: 92-103.
48. Steven Gray, Alexey Voinov, Michael Paolisso, Rebecca Jordan, Todd K. BenDor, Pierre Bommel, Pierre Glynn, Beatrice Hedelin, Klaus Hubacek, Josh Introne, Nagesh Kolagani, Bethany Laursen, Christina Prell, Laura Schmitt-Olabisi, Alison Singer, Eleanor Sterling, and Moira Zellner. 2018. Purpose, Processes, Partnerships, and Products: 4Ps to advance Participatory Socio-Environmental Modeling. *Ecological Applications* 28(1): 46-61.
47. Whittemore, Andrew H., and Todd K. BenDor. 2018. Talking about Density: An Empirical Investigation of Framing. *Land Use Policy* 72: 181-91.
46. Vitro, Kristen A. *, Miranda E. Welsh*, Todd K. BenDor, Aaron Moody. 2017. Ecological theory explains why diverse island economies are more stable. *Complex Systems* 26(30): 135-156.
45. Vitro, Kristen A. *, Todd K. BenDor, and J. Adam Riggsbee. 2017. Pre-listing conservation of candidate species under the endangered species act: An evaluation of prevalence, accessibility, and market-based conservation efforts. *Environmental Science and Policy* 74: 68-74.
44. Galik, Christopher, Todd K. BenDor, Julie DeMeester and David Wolfe. 2017. Improving Habitat Exchange Planning Through Theory, Application, and Lessons from Other Fields. *Environmental Science and Policy* 73: 45-51.
43. Vitro, Kristen A. *, Todd K. BenDor, Tania V. Jordanova*, Brian Miles*. 2017. A geospatial analysis of land use and stormwater management on fecal coliform contamination in North Carolina streams. *Science of the Total Environment* 603-604: 709-727.
42. BenDor, Todd K., Danielle Spurlock, Sierra Woodruff*, and Lydia Olander. 2017. A research agenda for ecosystem services in American environmental and land use planning. *Cities* 60 (Part A): 260-271.
41. Woodruff, Sierra* and Todd K. BenDor. 2016. Ecosystem services in urban planning: Comparative paradigms and guidelines for high quality plans. *Landscape and Urban Planning* 152: 90-100.
40. Widis, Daniel C. *, Todd BenDor, and Michael Deegan. 2015. Prioritizing Wetland Restoration Sites: A Review and Application to a Large-Scale Coastal Restoration Program. *Ecological Restoration* 33(4): 358-377.
39. Woodruff, Sierra* and Todd K. BenDor. 2015. Is Information Enough? The Effects of Watershed Approaches and Planning on Targeting Ecosystem Restoration Sites. *Ecological Restoration* 33(4): 378-387.
38. BenDor, Todd K., T. William Lester, Avery Livengood*, Adam Davis, Logan Yonavjak*. 2015. Estimating the Size and Impact of the Ecological Restoration Economy. *PLoS ONE* 10(6): e0128339.
37. BenDor, Todd K., Avery Livengood*, T. William Lester, Adam Davis, and Logan Yonavjak*. 2015. Defining and Evaluating the Ecological Restoration Economy. *Restoration Ecology* 23(3):209-219.
36. Berry, Marisa* and Todd BenDor. 2015. Integrating Sea Level Rise into Development Suitability Analysis. *Computers, Environment, and Urban Systems* 51: 13-24.
35. BenDor, Todd K., Douglas A. Shoemaker*, Jean Claude Thill, Monica Dorning*, Ross K. Meentemeyer. 2014. A Mixed-Methods analysis of socio-ecological feedbacks between urbanization and forest persistence. *Ecology and Society* 19(3):3.
34. Robertson, Morgan, Todd BenDor, Rebecca Lave, J. Adam Riggsbee, J.B. Ruhl, and Martin Doyle. 2014. Stacking ecosystem services. *Frontiers in Ecology and the Environment* 12: 186-193.
33. BenDor, Todd K. and Sierra Woodruff*. 2014. Moving targets and biodiversity offsets for Endangered Species Habitat: Is Lesser Prairie Chicken Habitat a Stock or a Flow? *Sustainability* 6(3), 1250-1259.
32. BenDor, Todd K., Tianshu Guo*, and Andrew Yates. 2014. Optimal Staging of Credit Releases in Ecosystem Service Markets. *Environmental Management* 53:496-509.
31. Rissman, Jeffrey*, Sarav Arunachalam, Todd BenDor, Jason West. 2013. Equity and Health Impacts of Aircraft Emissions at the Hartsfield-Jackson Atlanta International Airport. *Landscape and Urban Planning* 120: 234-247.

30. Rissman, Jeffrey*, Sarav Arunachalam, Matt Woody, Jason West, Todd BenDor, H. Wong, and F. Binkowski. 2013. A plume-in-grid approach to characterize air quality impacts of aircraft emissions at the Hartsfield–Jackson Atlanta International Airport. *Atmospheric Chemistry and Physics* 13: 9285–9302.
29. Kaza, Nikhil and Todd K. BenDor. 2013. Land Value Impacts of Wetland Restoration. *Journal of Environmental Management* 127:289-299.
28. BenDor, Todd K., James Westervelt, and Yan Song. 2013. Modeling park development through regional land use change simulation. *Land Use Policy* 30(1): 1-12.
27. BenDor, Todd K. and Nikhil Kaza. 2012. A Theory of Spatially Dynamic Reference Modes and System Archetypes. *System Dynamics Review* 28(2): 109-130.
26. BenDor, Todd K. 2012. The System Dynamics of Automobile American Fuel Economy. *Sustainability* 4: 1013-1042.
25. Oppenheimer, Kathleen* and Todd BenDor. 2012. A Comprehensive Solution to the Biofouling Problem for the Endangered Florida Manatee and other Species. *Environmental Law Review* 42(2): 415-467.
24. Doyle, Martin and Todd K. BenDor. 2011. Evolving Law and Policy for Freshwater Ecosystem Service Markets. *William & Mary Environmental Law & Policy Review* 36(1): 153- 191.
23. BenDor, Todd K., J. Adam Riggsbee and Martin Doyle. 2011. Risk in Ecosystem Service Markets. *Environmental Science and Technology* 45(24): 10322-10330.
22. BenDor, Todd K., Philip Berke, Dave Salvesen, Yan Song, and Nora Lenahan*. 2011. Assessing Local Government Capacity to Manage and Model Military-Induced Growth in Eastern North Carolina. *Planning Practice and Research* 26(5): 531-553.
21. Van Schaack, Chandler* and Todd K. BenDor. 2011. A Comparative Study of Green Building in Urban and Rural North Carolina. *Journal of Environmental Planning and Management* 54(8): 1125-1147.
20. BenDor, Todd K. and J. Adam Riggsbee. 2011. Regulatory and Ecological Risk under Federal Requirements for Compensatory Wetland and Stream Mitigation. *Environmental Science and Policy* 14: 639-649.
19. BenDor, Todd K., Sara Metcalf, Mark Paich. 2011. The Dynamics of Brownfield Redevelopment. *Sustainability* 3(6): 914-936
18. BenDor, Todd K. and J. Adam Riggsbee. 2011. Effects of Federal Mitigation Rules on Wetland and Stream Mitigation Banking Risk. *Environmental Science and Policy* 14(3): 301-314.
Selected as Editor's Choice in Science: "Banking on Wetlands" (29 April, 2011; Science 332: 514)
17. BenDor, Todd K. and Audrey Stewart*. 2011. Land Use Planning and Social Equity in North Carolina's Compensatory Wetland Mitigation Program. *Environmental Management* 47(2): 239-253.
16. Westervelt, James, Todd K. BenDor and Joseph Sexton. 2011. A Technique for Rapidly Assessing Regional Scale Urban Growth. *Environment and Planning: B* 38(1): 61-81.
15. Berg, Hannah* and Todd K. BenDor. 2010. A Case Study of Form-Based Solutions for Watershed Protection. *Environmental Management* 46: 436–451.
14. Metcalf, Sara S., Emily Wheeler, Todd K. BenDor, Ken Lubinski, and Bruce M. Hannon. 2010. Sharing the Floodplain: Finding Common Ground through Mediated Modeling. *Environmental Modelling and Software* 25(11): 1282-1290.
13. BenDor, Todd K. and Martin Doyle. 2010. Planning for Ecosystem Service Markets. *Journal of the American Planning Association* 76(1): 59-72.
12. Hamstead, Zoe* and Todd K. BenDor. 2010. Nutrient Trading for Enhanced Water Quality: A Case Study of North Carolina's Neuse River Compliance Association. *Environment and Planning: C* 28(1): 1-17.
11. BenDor, Todd K., Joel Sholtes*, Martin Doyle. 2009. Landscape Characteristics of a Stream and Wetland Mitigation Banking Program. *Ecological Applications* 19(8): 2078-2092
10. BenDor, Todd K. Jim Westervelt, J.P. Aurambout, and William Meyer. 2009. Simulating Population Variation and Movement within Fragmented Landscapes: A Spatial Dynamic Model of the Gopher Tortoise (*Gopherus polyphemus*). *Ecological Modelling* 220: 867-878.
9. Scheffran, Jürgen, Todd K. BenDor, and Bruce M. Hannon. 2009. Bioenergy and Land Use: A Spatial-Agent Dynamic Model of Energy Crop Production in Illinois. *International Journal of Environment and Pollution* 39(1/2): 4-27.
8. BenDor, Todd K., Jürgen Scheffran, and Bruce M. Hannon. 2009. Ecological and Economic Sustainability in Fishery Management: A Multi-Agent Model for Understanding Competition and Cooperation. *Ecological Economics* 68(4): 1061-1073.

7. BenDor, Todd K. 2009. A Dynamic Analysis of the Wetland Mitigation Process and Its Effects on No Net Loss Policy. *Landscape and Urban Planning* 89: 17-27.
6. BenDor, Todd K., Nicholas Brozovic, and Varkki George Pallathucheril. 2008. The Social Impacts of Wetland Mitigation Policies in the United States. *Journal of Planning Literature* 22: 341-357.
5. BenDor, Todd K. and Nicholas Brozovic. 2007. Determinants of Spatial and Temporal Patterns in Compensatory Wetland Mitigation. *Environmental Management*, 40(3): 349-364
4. BenDor, Todd K., Nicholas Brozovic, and Varkki George Pallathucheril. 2007. Assessing the Socioeconomic Impacts of Wetland Mitigation in the Chicago Region. *Journal of the American Planning Association* 73(3): 263-282.
3. BenDor, Todd K., Sara S. Metcalf, Lauren E. Fontenot, and Brandi Sangunett. 2006. Modeling the Emerald Ash Borer Spread: A Decision Support System for Invasive Species Eradication. *Ecological Modelling*, 197: 221-236.
2. BenDor, Todd K. and Sara S. Metcalf. 2006. The Spatial Dynamics of Invasive Species Spread. *System Dynamics Review*, 22(1): 27-50.
1. BenDor, Todd K. and Andrew Ford. 2006. Simulating a Combination of Feebates and Scrappage Incentives to Reduce Automobile Emissions. *Energy*, 31: 1197-1214.

Book Chapters

- Woodruff*, Sierra, Kristen A Vitro*, and Todd K BenDor. 2018. GIS and Coastal Vulnerability to Climate Change. In: *Comprehensive Geographic Information Systems, Volume 2*. Oxford, England: Elsevier. Pgs. 236–257
- Kelmenson, Sophie*, Todd BenDor, and T. William Lester. 2017. The economic impacts of a single restoration project. In: *Economia Da Restauração Florestal (Forest Restoration Economy)*, edited by Rubens Benini and Sergio Adeodato. The Nature Conservancy: São Paulo, Brazil. (Published in Portuguese and English). Pgs. 92-105.
- Auerbach, Daniel A.* and Todd K. BenDor. Prospects for Pre-Listing Conservation in Freshwater Ecosystems. 2014. In: *Markets and the Endangered Species Act: Incentivizing Conservation Upstream of Regulation*, edited by Josh Donlan and Todd Gardner. University of California Press: Berkeley, CA. Pgs. 149-166.
- Westervelt, James and Todd K. BenDor. (2012). A Technique for Rapidly Forecasting Regional Urban Growth. In: *Ecologist-Developed Spatially-Explicit Dynamic Landscape Models*, edited by James Westervelt and Gordon Cohen. Springer-Verlag: New York. Pgs. 223-234.
- BenDor, Todd K, James Westervelt, J.P. Aurambout, and William Meyer. (2012). Simulating Gopher Tortoise (*Gopherus polyphemus*) Populations in Fragmented Landscapes: an Application of the FRAGGLE model. In: *Ecologist- Developed Spatially-Explicit Dynamic Landscape Models*, edited by James Westervelt and Gordon Cohen. Springer- Verlag: New York. Pgs. 171-195.
- Doyle, Martin and Todd K. BenDor. 2012. Markets for freshwater ecosystem services. In: *Aquanomics: Water Markets and the Environment*. Edited by D. Gardener and R. Simmons. Independent Institute Press: San Francisco, CA. Pgs. 17-42.
- Jamison, Wesley, Todd. K. BenDor, Adrienne. L. Kolpak, and Maureen A. McDonnell. 2004. Political and Social Risk Amplification of GMOs. In: *Handbook of Plant Biotechnology*, edited by Paul Christou. London: John Wiley & Sons. Pgs. 949-957.

Refereed Conference Papers and Presentations

- Kyle Onda*, Todd K. BenDor, Brooke Ganser*, Nikhil Kaza, Michele Plausic*, Jordan Branham*, and David Salvesen. Does Removing Federal Subsidies Discourage Development? An Evaluation of the Impact of the U.S. Coastal Barrier Resources Act. Associated Collegiate Schools of Planning (ACSP) Conference, Buffalo, NY (October 25-28, 2018). Parallel session presentation.
- Jordan Branham*, Michael Everhart*, Todd K. BenDor, Nikhil Kaza, and David Salvesen. Investigating the Impact of the US Coastal Barrier Resources Act on Shoreline Hardening. Associated Collegiate Schools of Planning (ACSP) Conference, Buffalo, NY (October 25-28, 2018). Parallel session presentation.
- Alexey Voinov, Steven A. Gray, Todd K. BenDor. "Tools and Methods in Participatory Modeling." 9th International Congress on Environmental Modelling and Software, Fort Collins, CO (June 24-28 2018). Parallel session presentation.
- Laura Young, Jessica D. Brunacini, Steven A. Gray, Alexey A. Voinov, and Todd K. BenDor. "Method Selection in Participatory Modeling: A Survey of Practitioners." 9th International Congress on Environmental Modelling and Software, Fort Collins, CO (June 24-28 2018). Parallel session presentation.

- Stefan Woehlke, Beatrice Hedelin, Steven A. Gray, and Todd K. BenDor. "Evaluating the Participatory Modeling Process: An Analysis of Past Practices for the Development of Best Practices." 9th International Congress on Environmental Modelling and Software, Fort Collins, CO (June 24-28 2018). Parallel session presentation.
- BenDor, Todd K., Jürgen Scheffran. "Viability theory and agent-based modeling: a new, synergistic approach to modeling environmental conflict." 9th International Congress on Environmental Modelling and Software, Fort Collins, CO (June 24-28 2018). Parallel session presentation.
- BenDor, Todd K. and Kristen Vitro. Landowner reactions to coastal saltwater intrusion: creating a typology for mapping future vulnerability. Associated Collegiate Schools of Planning (ACSP) Conference, Denver, CO (October 12-15, 2017). Parallel session presentation.
- BenDor, Todd K. 2017. Estimating the Size and Economic Impact of the Ecological Restoration Industry. VII World Conference on Ecological Restoration, Foz do Iguacu, Brazil (August 27–Sept 1, 2017). Parallel presentation.
- BenDor, Todd K., Sierra Woodruff, Aaron Strong. 2017. Fighting the inevitable: systems thinking, infrastructure, and coastal community trajectories in the face of sea level rise. International System Dynamics Conference, Cambridge, MA (July 16-20, 2017). Poster presentation.
- Bhattachan, Abinash, Ryan Emmanuel, Todd K. BenDor, and Marcelo Ardon-Sayao. 2016. Re-plumbing the coast: Untangling the effects of climate change and water management on vulnerability of coastal landscapes to saltwater incursion. 2016 American Geophysical Union Fall meeting, San Francisco (December 12-16, 2016). Parallel session presentation
- BenDor, Todd K., Kristen Vitro, Ryan Emmanuel, Marcelo Ardon-Sayao, Emily Bernhardt, and Justin Wright. 2015. Salinization of the coastal plain through saltwater intrusion - landscapes in transition along the leading edge of climate change. Associated Collegiate Schools of Planning (ACSP) Conference, Houston, TX (October 22-25, 2015). Parallel session presentation.
- BenDor, Todd K., Jürgen Scheffran, Nikhil Kaza. 2015. An Adaptive dynamic model of climate change and emissions trading. International System Dynamics Conference, Cambridge, MA (July 19-24, 2015). Parallel session presentation.
- BenDor, Todd K., T. William Lester, Avery Livengood, Adam Davis, Logan Yonavjak. 2014. Quantifying the restoration economy: evaluating the amount and economic impact of ecological restoration in the united states. Associated Collegiate Schools of Planning (ACSP) Conference, Philadelphia, PA (October 30-November 2, 2014). Parallel session presentation.
- BenDor, Todd K. 2012. Planning and the Geography of Green Development. 2012 Associated Collegiate Schools of Planning (ACSP) Conference, Cincinnati, OH. (Nov 1-4, 2012). Round table discussion.
- Yates, Andrew and Todd K. BenDor. 2011. Optimal Contracts for Wetland Mitigation. Southern Economic Association 81st Annual Meeting, Washington DC. (November 19-21, 2011). Parallel session presentation
- Nikhil, Kaza and Todd K. BenDor. 2011. Land Value Impacts of Aquatic Ecosystem Restoration: An Analysis of the Research Triangle Region of North Carolina. 2011 Associated Collegiate Schools of Planning (ACSP) Conference, Salt Lake City, UT. (October 13-16, 2011). Parallel session presentation.
- BenDor, Todd K. 2010. Risk and Regulation in Markets for Ecosystem Services. Associated Collegiate Schools of Planning (ACSP) Conference, Minneapolis, MN. (October 2010). Paper and parallel session presentation.
- BenDor, Todd K. and Martin Doyle. 2009. Urban Planning and Ecosystem Service Markets. 2009 Associated Collegiate Schools of Planning (ACSP) Conference, Washington, D.C. (October 2009). Paper and parallel session presentation.
- BenDor, Todd K., James Westervelt, Jean-Phillippe Aurambout, and William Meyer. 2008. Modeling the Impacts of Land Use Change on Wildlife Habitat Fragmentation and Genetic Diversity. 2008 Associated Collegiate Schools of Planning (ACSP)/AESOP Conference, Chicago, IL (July 2008). Paper and parallel session presentation.
- BenDor, Todd K. and Nicholas Brozovic. 2007. Wetland Mitigation Method Selection and Developer Decision-Making Processes. 2007 Associated Collegiate Schools of Planning (ACSP) Conference, Milwaukee, WI (November 2007). Paper and parallel session presentation.
- BenDor, Todd K. 2007. Modeling the Wetland Mitigation Process: A New Dynamic Vision of No Net Loss Policy. International System Dynamics Conference, Boston, MA (July 29 – August 2, 2007). Paper and parallel session presentation.
- Scheffran, Jürgen, Todd K. BenDor, Yun Wang, and Bruce Hannon. 2007. A Spatial-Dynamic Model of Bioenergy Crop Introduction in Illinois. International System Dynamics Conference, Boston, MA (July 29 – August 2, 2007). Paper and parallel session presentation.

- BenDor, Todd K. and Nicholas Brozovic. 2006. Mitigation Policy and its Effects on Wetland Relocation and Redistribution in the Chicago Region. 2006 North American Meetings of the Regional Science Association International, Toronto, ON (November 15-18, 2006). Parallel session presentation.
- BenDor, Todd K. 2006. Socioeconomic Impacts of Wetland Mitigation: A Spatial Analysis of the Chicago, IL Region. 2006 Associated Collegiate Schools of Planning (ACSP) Conference, Fort Worth, TX (November 9-12, 2006). Parallel session presentation.
- BenDor, Todd K., Varkki George Pallathucheril, and Bruce M. Hannon. 2005. Modeling the Spread of the Emerald Ash Borer: A Knowledgebase for Future Eradication Strategies. 2005 Associated Collegiate Schools of Planning (ACSP) Conference, Kansas City, MO (October 27-30, 2005). Parallel session presentation.
- BenDor, Todd K., Sara S. Metcalf, Lauren E. Fontenot, and Brandi Sangunett. 2005. A Decision Support System for Emerald Ash Borer Eradication Using Spatial-Dynamic Modeling. International System Dynamics Conference, Boston MA (July 17-21, 2005). Plenary session presentation.
- BenDor, Todd K. and Sara S. Metcalf. 2005. Conceptual Modeling and Dynamic Simulation of Brownfield Redevelopment. 23rd International System Dynamics Conference, Boston MA (July 17-21, 2005). Parallel session presentation.

Non-Refereed Published Works

- BenDor, Todd K, and David Salvesen. 2018. Improving NC's Floodplain Buyout Program. Coastal Review Online. November 2, 2018: <https://www.coastalreview.org/2018/11/improving-ncs-floodplain-buyout-program/>
- BenDor, Todd K. 2017. Tampering with scientific advisory boards destroys public trust. Op-ed in the Raleigh News and Observer." May 17, 2017: <http://www.newsobserver.com/opinion/op-ed/article151130352.html>
- BenDor, Todd K. 2017. Analysis of Trail User Spending for the Rails to Trails Conservancy's Northeastern Trail Network. Rails to Trails Conservancy: Washington, D.C.
- Kelmenson, Sophie*, Todd BenDor, and T. William Lester. 2016. Economic Impacts of the US Ecological Restoration Sector. *Communities & Banking* Summer: 25-27.
- BenDor, Todd K. 2015. Saltwater intrusion a threat. Op-ed in the "Greenville Reflector." June 15, 2015: <http://www.reflector.com/opinion/other-voices/bendor-saltwater-intrusion-threat-2905969>
- BenDor, Todd K. and Kristen Vitro. 2014. Comments on "Policy Regarding Voluntary Prelisting Conservation Actions (Rulemaking)" by USFWS. [Action: FWS-R9-ES-2011-0099-0111] Comment ID: 1jy-8fck-g2cr.
- Hesselgrave, Taylor, Cathy Kellon, Todd BenDor, and Noah Enelow. Proposal for 2017 North American Industry Classification System (NAICS) Revision [NAICS designation for firms engaging in the ecological restoration industry]. In Response to 29 Fed Reg 99, 5/22/14. Docket number 17-0070. 29 pages.
- BenDor, Todd K. and Sierra Woodruff*. 2014. Comments on the Environmental Defense Fund and American Habitat Center Habitat Credit Exchange (HCEX) (FWS-R2-ES-2013-0134) by USFWS, "Notice of Intent to Prepare an Environmental Impact Statement for a Habitat Conservation Plan for Commercial Developments, Including Energy Developments, and Agricultural and Conservation Activities Within Six States" (79 FR 7472).
- BenDor, Todd K., T. William Lester, Avery Livengood*, Adam Davis, and Logan Yonavjak*. 2014. Exploring and Understanding the Restoration Economy. Final report to Walton Family Fund. Also UNC Center for Urban and Regional Studies white paper [Online]: <https://curs.unc.edu/files/2014/01/RestorationEconomy.pdf>
- BenDor, Todd K. and Sierra Woodruff*. 2014. Comments on the temporary/permanent nature of LPC habitat impacts. Formal comments submitted to federal rulemaking (FWS-R2-ES-2012-0071; 4500030113) by USFWS, "Endangered and Threatened Wildlife and Plants; Listing the Lesser Prairie-Chicken as a Threatened Species with a Special Rule" (50 CFR Part 17).
- BenDor, Todd K. and Sierra Woodruff*. 2014. Comments on the Western Association of Fish and Wildlife Agencies' Lesser Prairie-Chicken Range-Wide Conservation Plan. Formal comments submitted to federal rulemaking (FWS-R2-ES-2012-0071; 4500030113) by USFWS, "Endangered and Threatened Wildlife and Plants; Listing the Lesser Prairie-Chicken as a Threatened Species with a Special Rule" (50 CFR Part 17). Also published as UNC Institute for the Environment Whitepaper.
- BenDor, Todd K. and Sierra Woodruff*. 2014. Moving targets and biodiversity offsets for endangered species habitat: Is habitat a stock or flow? UNC Institute for the Environment Whitepaper.
- BenDor, Todd K. and Sierra Woodruff*. 2014. Preliminary Analysis of the Habitat Credit Exchange (HCEX). UNC Institute for the Environment Whitepaper.

- Berkey, Kathleen Oppenheimer* and Todd K. BenDor. 2013. A Comprehensive Solution to the Biofouling Problem for the Endangered Florida Manatee & Other Species. *Planning and Law* (Summer 2013): 7. Planning and Law Division of the *American Planning Association*.
- BenDor, Todd K. and Robert Goodspeed. 2013. Keeping Up with the Field: Computerized Tools for Tracking Research and New Ideas. *Planetizen* (Tuesday, Feb 5, 2013). [Online]: <http://www.planetizen.com/node/60607>
- Leitelt, Lyle* and Todd BenDor. 2010. Developing a Solar Energy Potential Map for Chapel Hill, NC. *Planning Advisory Service Memo*. (November/December 2010). [Also Online]: <http://www.planning.org/pas/memo/2010/nov/>
- BenDor, Todd K., Joel Sholtes*, and Martin Doyle. 2010. Landscape Characteristics of a Stream and Wetland Mitigation Banking Program (abstract). *National Wetlands Newsletter* 32(4): 16
- BenDor, Todd K. and Martin Doyle. The Authors Respond. *National Wetlands Newsletter* 32(4): 21
- BenDor, Todd and Chandler Van Schaack*. 2010. Greener building for a growing rural NC," Op-Ed in *Asheville Citizen-Times* (Asheville, NC: April 20, 2010): <http://www.citizen-times.com/apps/pbcs.dll/article?AID=2010100419033>
- BenDor, Todd, J. Adam Riggsbee, and George Howard. 2010. A Survey of Mitigation Banker Perceptions and Experiences Under the 2008 Federal Mitigation Regulations. *National Wetlands Newsletter* 32(2): 11-15.
- Doyle, Martin and Todd BenDor. "Stream Restoration: Who Really Benefits," Op-Ed in *Raleigh News and Observer* (Raleigh, NC: December 8, 2009): http://www.newsobserver.com/opinion/columnists_blogs/other_views/story/242385.html
- BenDor, Todd, J. Adam Riggsbee, and George Howard. "Mitigation Bankers Say New Rule Heightens Old Conflicts: Survey." Op-Ed at *Ecosystem Marketplace* (November 20, 2009; [EMP is a major, worldwide clearinghouse for ecosystem services and market information]): http://ecosystemmarketplace.com/pages/article.opinion.php?component_id=7231&component_version_id=11043&language_id=12
- BenDor, Todd. "A New Form of Water-Quality Protection," Op-Ed in *Raleigh News and Observer* (Raleigh, NC: November 1, 2009): http://www.newsobserver.com/opinion/columnists_blogs/other_views/story/166402.html.
- BenDor, Todd K. and J. Adam Riggsbee. A National Survey of Federal Mitigation Regulations and their Impacts on Wetland and Stream Banking. Report to the National Mitigation Banking Association (NMBA) (Orlando, FL).
- BenDor, Todd. "BRAC Demands Require Creativity," Op-Ed in *Fayetteville Observer* (Fayetteville, NC: July 9, 2009): <http://www.fayobserver.com/Articles/2009/07/08/915698>.
- Berke, Phillip, Todd BenDor, Dave Salvesen, Yan Song and Nora Lenahan*. 2009. "Building Local Government Capacity to Manage Growth in Eastern North Carolina." A Report to support the Southeast Regional Partnership for Planning and Sustainability (SERPPAS). Center for Sustainable Community Design, Institute for the Environment. University of North Carolina at Chapel Hill: Chapel Hill, NC.
- BenDor, Todd and Martin Doyle. "Build the Environment, Too," Op-Ed in *Raleigh News and Observer* (Raleigh, NC: March 5, 2009): <http://www.newsobserver.com/opinion/columns/story/1428828.html>.
- BenDor, Todd and Nicholas Brozovic. 2007. The Role of Regulatory Change on Wetlands Mitigation. *The National Wetlands Newsletter*, 29(4): 10-13, 21.
- BenDor, Todd K., Jeff M. Bielicki, Brian S. Powell, and Derrick T. Robinson. 2004. Modeling Feedback Mechanisms Between Land Use and Climate Change. Proceedings of the 2004 Santa Fe Institute Complex Systems Summer School, Santa Fe, NM (June 6–July 3, 2004). Paper and plenary session presentation.

Non-Refereed Conference Presentations

- BenDor, Todd K, Dylan Timmerman, and Sarah Wraight. Predicting the existence and performance of US Water quality trading programs. A Community on Ecosystem Services Conference (ACES), Washington, DC. (Dec 3-6, 2018). Parallel session presentation.
- David Salvesen, Todd K. BenDor, Christian Kamrath, and Brooke Ganser. Are Floodplain Buyouts a Smart Investment for Municipalities? Carolinas Climate Resilience Conference. October 29-31, 2018. Columbia, SC
- David Salvesen, Todd K. BenDor, Christian Kamrath, and Brooke Ganser. Are Floodplain Buyouts a Smart Investment for Municipalities? Fall Floodplain Institute. North Carolina Association of Floodplain Managers. Asheville, NC. October 18-19, 2018.

- BenDor, Todd K. "Adaptation for restoration: evolving policies, business models, and markets." National Mitigation and Ecosystem Banking Conference, Louisville, KY (May 8-11, 2017). Parallel session presentation
- Todd K. BenDor, Ross Meentemeyer, Helena Mitasova, Kevin Foy, Emily Bernhardt. RCN: Smart Civic Engagement in Rapidly Urbanizing Regions, NSF Award #1737563. 2018 NSF Smart and Connected Communities PI Meeting, Kansas City, MO (March 26-27, 2018). Plenary presentation.
- BenDor, Todd K., Abinash Bhattachan, Ryan Emanuel, Ian Hamilton, Philip McDaniel. 2016. "Saltwater Intrusion Vulnerability and Coastal Drainage Infrastructure: Historic Evaluation of a Trojan Horse." 3rd Annual UNC Climate Change Symposium, Chapel Hill, NC (April 22, 2016). Plenary presentation.
- BenDor, Todd K. 2015. "Agent-Based Modeling of Environmental Conflict and Cooperation." System Dynamics Winter Camp, Albuquerque, NM (January 9-11, 2015). Plenary presentation.
- BenDor, Todd K., T. William Lester, Avery Livengood, Adam Davis, and Logan Yonavjak. 2014. "Estimating the Size and Impact of the Ecosystem Restoration Economy." A Community on Ecosystem Services Conference (ACES), Washington, DC. (Dec 8-12, 2014). Poster presentation.
- BenDor, Todd K. and Sierra Woodruff. 2014. "Permanence of Biodiversity Offsets for Endangered Species Habitat: An Application to the Lesser Prairie Chicken." The Wildlife Society 2st Annual Conference, Pittsburgh, PA (October 25-30, 2014). Parallel session presentation
- BenDor, Todd K., Danielle Spurlock, and Lydia Olander. 2014. "Ecosystem services in American land use and environmental planning." 99th Ecological Society of America Conference, Sacramento, CA (April 10-16).
- BenDor, Todd K., T. William Lester, Avery Livengood, Adam Davis, and Logan Yonavjak. "What are the Economic Impacts of the Ecological Restoration Industry?" National Mitigation and Ecosystem Banking Conference, Denver, CO (May 7-9, 2014). Plenary presentation.
- Shoemaker, Douglas A., Ross K. Meentemeyer, Todd K. BenDor. "The Roots That Bind: A Spatial Analysis of Forest Persistence and Woodland Owner Values at the Urban Frontier." US-IALE 2013 (Annual Symposium of the U.S. Regional Association of the International Association for Landscape Ecology), Austin, TX (April 14-18, 2013). Parallel session presentation.
- BenDor, Todd K. "Prioritizing Wetland: Restoration: A Review and Application to the Mississippi Coastal Improvements Program, U.S.A." ACES and Ecosystem Markets 2012, Fort Lauderdale, FL (December 10-14, 2012). Moderator for "Ocean Ecosystem Services" session. Parallel session presentation
- Robertson, Morgan, Todd K. BenDor, Rebecca Lave, J. Adam Riggsbee, Martin Doyle, and J.B. Ruhl. "To bundle or to stack? The challenges in marketing multiple ecosystem services." Meeting of the Ecological Society of America, Portland OR (August 10, 2012). Parallel session presentation.
- Robertson, Morgan, Todd BenDor, Rebecca Lave, J. Adam Riggsbee, Martin Doyle, and J.B. Ruhl. "Stacking Ecosystem Services." 4th International Eco-Summit, Columbus, Ohio (September 3-October 5, 2012). Parallel session presentation.
- Thill, Jean-Claude F, Ross K. Meentemeyer, William Ribarsky, Chunhua Wang, Douglas Shoemaker, Vicki Bott, Todd K. BenDor. "Can Urbanization, Forest and Working Lands Coexist? Analysis of Socio-Ecological Interactions in the Charlotte Metropolitan Region." 58th Annual North American Meetings of the Regional Science Association International 2011, Miami, FL (November 9-12, 2011). Parallel session presentation.
- Ross K. Meentemeyer, Jean-Claude Thill, William Ribarsky, Chunhua Wang, Douglas A. Shoemaker, Vicki Bott, Todd K. BenDor. 2011. "Hierarchical Analysis of Socio-Ecological Interactions in the Charlotte Metropolitan Region: Can Urbanization, Forest and Working Lands Coexist?" U.S. International Association of Landscape Ecology Conference, Portland, OR (April, 2011). Parallel session presentation.
- BenDor, Todd K, Daniel Spethmann, and David Urban. 2010. "Economic Impact of Regulatory Timing on Mitigation Bank Returns." National Mitigation and Ecosystem Banking Conference, Austin, TX (May 3-6, 2010). Parallel session presentation.
- Philip Berke, Larry Band, Todd BenDor, David Salvesen, and Yan Song. 2009. "Building Local Government Capacity to Manage Growth in Eastern North Carolina." SERPPAS Principals' Meeting, Charleston, South Carolina (May 19 - 20, 2009). Poster presentation.
- BenDor, Todd K. 2009. "Credit Release Schedules and their Implications for Compensatory Mitigation Markets." National Mitigation and Ecosystem Banking Conference, Salt Lake City, UT (May 5-8, 2009). Parallel session presentation.
- BenDor, Todd K., Martin Doyle, Joel Sholtes*. 2008. "Landscape Characteristics of a Stream and Wetland Mitigation Banking Program: The North Carolina Ecosystem Enhancement Program." North Carolina Water Resource Research Institute (WRRRI) Annual Meeting, Raleigh, NC (October 8-9, 2008). Parallel session presentation.

- BenDor, Todd K., Martin Doyle, Joel Sholtes*. 2008. "Spatial characteristics of an emergent stream mitigation banking program: economic and ecological implications." 29th Society of Wetland Scientists Annual Meeting, Washington, DC (May 26-30, 2008). Parallel session presentation.
- Wheeler, Emily, Ken. S. Lubinski, Todd K. BenDor, Bruce Hannon, Sara S. Metcalf. 2008. "Stakeholder Participation: When the Modeling Process is as Important as the Product." 2nd USGS Modeling Conference, "Painting the Big Picture", Orange Beach, Alabama (February 11-15, 2008). Poster presentation.
- BenDor, Todd K. 2007. "A Dynamic View of No Net Loss: Modeling the Wetland Mitigation Process." 28th Society of Wetland Scientists Annual Meeting, Sacramento, CA (June 10-15, 2007). Parallel session presentation.
- Wheeler, Emily, Sara S. Metcalf, and Todd K. BenDor. 2006. "Process as Product: Seeking Common Ground for Floodplain Functionality and Development." International Conference on Rivers and Civilization, LaCrosse, WI (June 25-28, 2006). Poster presentation.
- BenDor, Todd K. 2006. "Spatial Trends in Off-Site Wetland Mitigation in the Chicago Region." 2006 AAG Annual Meeting, Chicago, IL (March 7-11, 2006). Parallel session presentation.
- BenDor, Todd K. 2005. Dissertation Research Proposal: "Mitigation Effects on Wetland Redistribution through Space and Time." 6th System Dynamics PhD Colloquium at the 23rd International System Dynamics Conference, Boston MA (July 17, 2005). Plenary presentation.
- BenDor, Todd K. 2005. Effective Public Investment in the St. Louis Region: "More for your Money". East-West Gateway Coordinating Council Blueprint Workshop, St. Louis, MO (June 16, 2005). Poster presentation.
- BenDor, Todd K. 2005. "LEAM Brownfield Redevelopment Model." East-West Gateway Coordinating Council Blueprint Workshop, St. Louis, MO (June 16, 2005). Poster presentation.
- Pallathucheril, Varkki George, Todd K. BenDor, and Sara S. Metcalf. 2004. "Regional Modeling and the Role of Brownfields Redevelopment in Urban Land Use Transformation." Brownfields 2004: Gateway to Revitalization, St. Louis, MO (September 20-22, 2004). Parallel session presentation.
- BenDor, Todd K. 2004. "Modeling the Development of Urban Recreational Open Space." 24th Annual National Association of Recreation Resource Planners Conference, Omaha, Nebraska (May 16-20, 2004). Parallel session presentation.
- BenDor, Todd K. 2004. "LEAM Open Space Model." East-West Gateway Coordinating Council Blueprint Workshop, St. Louis, MO (May 21, 2004). Poster presentation.

Non-Refereed Workshops and Invited Presentations

- "Transfer of development rights and water quality trading: A comparative assessment for creative, market-based environmental policies" Center for Urban and Regional Studies, Chapel Hill, NC (February 22, 2018).
- "System Dynamics and Innovation in Market-Based Approaches to Environmental Protection." Shanghai Academy of Agricultural Sciences, Shanghai, China (July 31, 2017).
- "Ecology and Land Use Planning." Huazhong Agricultural University. Led 4.5-day workshop for ~12 undergraduate and graduate students, and faculty. Wuhan, China (July 24-28, 2017).
- "Academic Publishing 101: From Idea to Article...and Beyond." Huazhong Agricultural University, Summer Colloquium Series, Wuhan, China (July 28, 2017).
- "Reactions to Coastal Saltwater Intrusion: Creating a landowner typology for mapping vulnerability." Huazhong Agricultural University, Summer Colloquium Series, Wuhan, China (July 28, 2017).
- "Quantifying the restoration economy: evaluating the economic impact of ecological restoration in the united states." Huazhong Agricultural University, Summer Colloquium Series, Wuhan, China (July 27, 2017).
- "Reactions to Coastal Saltwater Intrusion: Creating a landowner typology for mapping vulnerability." Socio-Environmental Synthesis Center (SESYNC) Workshop: The effects of sea-level rise and saltwater intrusion on wetland nutrient transport and vegetation dynamics in the North American Coastal Plain. Annapolis, MD (April 4, 2017)
- "Determining the Economic and Employment Impacts of the Restoration Economy in the United States" World Resources Institute Expert Workshop: The Economics and Financing of Restoration Opportunities" Washington, D.C. (March 31, 2017)
- System Dynamics and Innovation in Market-Based Approaches to Environmental Protection." U.S. Environmental Protection Agency, National Exposure Research Laboratory (NERL), Research Triangle Park, NC (March 28, 2017)

“The economic impacts of ecological restoration: ideas to guide better NC strategy.” North Carolina Coastal Federation’s “Sound Economic Development Summit, Raleigh, NC (March 22, 2017).

“Permanence of Biodiversity Offsets for Endangered Species Habitat: An Application to the Lesser Prairie Chicken.” U.S. Environmental Protection Agency, National Exposure Research Laboratory (NERL), Research Triangle Park, NC (March 21, 2017)

“Pollution-Neutral Urban Landscapes: Integrated Modeling and Policy Feedbacks.” Centre for Advanced Spatial Analysis (CASA), University College-London (August 1, 2016).

“System Dynamics and Agent Based Modeling.” Data Matters: Data Science Short Course Series, Chapel Hill, NC (June 20-24, 2016). Two-day short course as part of series organized by the National Consortium for Data Science (NCDS), the Renaissance Computing Institute (RENCI), and the Odum Institute for Research in Social Science).

“Agent-based modeling for environmental conflict resolution.” Pennsylvania State University, Demographic Research Institute Symposium. State College, PA (Tuesday, May 17, 2016)

NC Wetland Symposium. Organized by Duke Wetland Center. Panel Member on Wetland Restoration in NC, Durham, NC (March 4, 2016).

“Agent-Based Modeling of Environmental Conflict and Cooperation,” Presentation given to Socio-Environmental Synthesis Center (SESYNC) Theme: Participatory Modelling for Action Oriented Outcomes, Annapolis MD (February 23-26, 2016).

Moderator for “Economic Impacts of Ecological Restoration” Panel at UNC Clean Tech Summit, Chapel Hill, NC (February 18-19, 2016).

“Quantifying the restoration economy: evaluating the economic impact of ecological restoration in the United States.” Working group on NC Coastal Restoration as Economic Development, Chapel Hill, NC (August 28, 2015). Organized by NC Coastal Federation.

“System Dynamics and Agent Based Modeling.” Data Matters: Data Science Short Course Series, Chapel Hill, NC (June 25-26, 2015). Two-day short course as part of series organized by the National Consortium for Data Science (NCDS), the Renaissance Computing Institute (RENCI), and the Odum Institute for Research in Social Science).

Panel member: “Pathways by which research results are translated to outreach, policy, and management domains” NSF coastal SEES Primary Investigators meeting, Washington, DC (January 29-30, 2015).

“Integrated Rule Oriented Data System (iRODS).” SESYNC Model Integration Workshop, Annapolis, MD (January 22-23, 2015).

“Innovative Approaches to Environmental Protection.” “Food for Thought,” UNC Honors College seminar program. Chapel Hill, NC (September 3, 2014).

“Introduction to Regression, Discrete Choice, and System Dynamics Modeling.” Huazhong Agricultural University. Led 4.5-day workshop for 20 undergraduate and graduate students, and faculty. Wuhan, China (July 9-11, 14-15, 2014).

“Innovative Market Approaches to Environmental Conservation.” Huazhong Agricultural University, Summer Colloquium Series, Wuhan, China (July 16, 2014).

“Introduction to Agent-Based Modeling.” UNC Odum Institute for Research in the Social Sciences (IRSS). Led 1-day workshop on agent-based modeling. Chapel Hill, NC (April 30, 2014).

“Academic Publishing 1401.” UNC Odum Institute for Research in the Social Sciences (IRSS). Half-day workshop. Chapel Hill, NC (April 4, 2014).

“Innovative Approaches to Urban Conservation.” Duke Conservation Society, Annual Forum (March 29, 2014)

“Introduction to System Dynamics Modeling.” UNC Odum Institute for Research in the Social Sciences (IRSS). Led 2-day workshop on systems thinking and modeling. Chapel Hill, NC (December 11-12, 2013).

“Spatial System Archetypes” MIT Sloan School of Management, System Dynamics Group. Cambridge, MA (Friday, October 25, 2013).

“Evolving law and policy for freshwater ecosystem service markets.” Guizhou University International Symposium on Ecological Construction and Green Development. Guiyang, China (July 19, 2013).

“Evolving policy, planning, and law for ecosystem service markets.” 2013 Eco-Forum Global Annual Meeting. Guiyang, China (July 19, 2013).

“Incorporating Ecosystem Services to Improve Urban Planning and Policy.” NAKFI Mid-Cycle Grant Meeting. Chicago, IL (June 24, 2013).

“Introduction to Agent-Based Modeling.” UNC Odum Institute for Research in the Social Sciences (IRSS). Led 1-day workshop on agent-based modeling. Chapel Hill, NC (April 19, 2013).

“Ecosystem Services as a New Foundation for Stormwater Planning.” Part II of National Academies Keck Futures Initiative (NAKFI) funded workshop series, “Incorporating Ecosystem Services to Improve Urban Planning and Policy.” University of North Carolina at Chapel Hill. Chapel Hill, NC (April 10-12, 2013). Principal organizer.

“Prioritizing Wetland Restoration: A Review and Application to the Mississippi Coastal Improvements Program (MsCIP).” UNC Curriculum in Ecology and the Environment Seminar. Chapel Hill, NC (February 14, 2013).

“Agent Based Modeling and Conflict.” Human Domain Analysis Workshop, U.S. Army Special Operations Command (USSOC), Fayetteville, NC (November 14th, 2012).

“An Agenda for Improving Urban Stormwater Decisions Using Ecosystem Services.” Part I of National Academies Keck Futures Initiative (NAKFI) funded workshop series, “Incorporating Ecosystem Services to Improve Urban Planning and Policy.” University of New Hampshire. Durham, NH (October 17-19, 2012). Organizer and Participant.

“Complexity and Environmental Conflict: Agent-Based Modeling for Understanding and Resolution. 2013 System Dynamics Winter Camp. Austin, TX (January 4-5, 2012).

“Impacts of Ecosystem Service Accounting on Environmental Planning and Policy.” Incorporating Ecosystem Services to Improve Urban Planning and Policy Workshop 1: Factors controlling scale and types of improvements possible. Sponsored by National Academies’ Keck Futures Initiative. University of New Hampshire, Durham, NH (October 17-19, 2012).

“Decision-making across multiple sectors for restoring aquatic habitat and benefits.” EPA-Duke Urban Sustainability Workshop. Research Triangle Park, NC (October 25, 2012).

“Academic Publishing 101: From Idea to Article...and Beyond.” MIT Department of Urban Studies and Planning, Environmental Planning and Policy (EPP) Seminar. Cambridge, MA (April 30, 2012).

“Mississippi Coastal Improvements Program (MsCIP) Ecosystem Restoration Analysis,” Institute for Water Resources, U.S. Army Corps of Engineers. Alexandria, VA (March 27, 2012).

“Dangerous Intersections on the Road to Ecosystem Markets.” Ecosystem Processes Branch Seminar, U.S. Army Corps of Engineers Engineering Research and Development Center, Construction Engineering Research Laboratory (ERDC-CERL). Champaign, IL (February 29th, 2012).

“Balancing Risk in Ecosystem Markets.” University of Illinois Program in Environmental and Resource Economics (pERE) Seminar. Urbana, IL (February 28, 2012).

“Risk and Ecosystem Service Markets.” MIT Department of Urban Studies and Planning. Cambridge, MA (February 17, 2012).

“Environmental Conflict, Ecosystem Markets, and Changing Urban Landscapes,” Institute for Water Resources, U.S. Army Corps of Engineers. Alexandria, VA (January 18, 2012).

“Management and Trading of Multiple Ecosystem Services,” Climate Change and Security Research Group. KlimaCampus, University of Hamburg. Hamburg, Germany (July 14, 2011).

“Growth, Development, and Demographic Change in the Albemarle-Pamlico Basin.” Future Scenarios Workshop of the Albemarle-Pamlico Basin (USGS-EPA Sponsored Meeting), Durham, NC (March 24, 2011).

“Dangerous Intersections on the Road to Ecosystem Markets” MIT Sloan School of Management, Sustainability Group. Cambridge, MA (January 28th, 2011).

“Toward a Theory of Spatially Dynamic Reference Modes and System Archetypes.” 2011 System Dynamics Winter Camp (with Nikhil Kaza). Austin, TX (January 7-8, 2011).

Participant in “Contracting for Ecosystem Service Markets,” colloquium, Property and Environment Research Center. Chapel Hill, NC (November 7–10, 2010).

“Forces Promoting U.S. Wetland and Stream Banking,” Property and Environment Research Center. Bozeman, MT (July 26, 2010).

Invited Panelist for Symposium on “Incentivizing Biodiversity Conservation”, Duke University Nicholas School of the Environment and Fuqua Business School (March 19, 2010).

“Credit Stacking and Risk in Operating Ecosystem Service Markets,” Invited Speaker to Duke Ecosystem Services Working Group (February 2, 2010).

“Landscape Operation of the North Carolina Ecosystem Enhancement Program,” North Carolina Environmental Restoration Association (NCERA). Raleigh, NC (November 12, 2008).

Participant in “Property Rights and the Environment,” colloquium, Property and Environment Research Center (PERC) and The Liberty Fund. Big Sky, MT (September 25–28, 2008).

Participant in “Journal of Planning Education and Research Writing Workshop,” sponsored by the American Collegiate Schools of Planning (Richmond, VA (August 8-9, 2008).

“Modeling the Wetland Mitigation Process and its Dynamic Effects on No Net Loss Policy,” University of North Carolina at Chapel Hill, Program in Ecology Seminar Series. Chapel Hill, NC (April 23, 2008).

“A Dynamic View of No Net Loss: Modeling the Wetland Mitigation Process,” Duke University Program in Ecology Seminar Series. Durham, NC (February 1, 2008).

“Redistribution Effects of Wetland Mitigation over Space and Time,” invited presentation at the UIUC Program in Environmental and Resource Economics Workshop (pERE), Champaign, IL (March 27, 2007).

“Redistribution Effects of Wetland Mitigation Over Space and Time,” Regulatory Branch, Wetlands Division, Environmental Protection Agency, Washington, D.C. (October 19, 2006).

“Wetland Mitigation and its Effects on People.” Associate Colleges of the Chicago Area, 2006 Biology Division Seminar Series, Benedictine University, Lisle, IL (September 26, 2006).

Presentation of Confluence I workshop models to USGS Upper Midwest Environmental Science Center (UMESC) Ecologists, LaCrosse, WI (April 13-14, 2006).

“Replacing Nature: A Spatial Analysis and Dynamic View of Wetland Mitigation and Land Use Change.” Lewis University Department of Biology Invited Speaker, Romeoville, IL (April 28, 2006).

“Redistribution Effects of Wetland Mitigation over Space and Time,” presentation to Illinois Chapter of The Nature Conservancy, Peoria, IL (October 17, 2005).

Modeling Facilitator. Confluence I: Seeking Common Ground for Floodplain Functionality and Development. A Workshop for River Stakeholders to Collaboratively Capture Information and Challenge Assumptions. Organized by: The Nature Conservancy. National Mississippi River Museum and Aquarium, Dubuque, Iowa. (August 16-18, 2005).

Publications in Review

Tully K, Gedan K, Strong A, Bernhardt E, BenDor T.K., Mitchell M, Kominoski J, Jordan T, Neubauer S, Weston N. The invisible flood: the chemistry, ecology, and consequences of saltwater intrusion. *Frontiers in Ecology and the Environment* (In Review).

BenDor, Todd K., David Salvesen, Christian Kamrath, and Brooke Ganser. Floodplain buyouts and municipal finance. *Natural Hazards Review* (In Review).

Publications in Preparation

Joca, Lauren and Todd K. BenDor. Database design for tracking environmental impacts and offsets: an analysis of the ORM2 database and proposed database design to adequately track wetland impacts and offsets. In Preparation.

Frerichs, Leah, Natalie Smith, Kristen Hassmiller Lich, Kelly R. Evenson, and Todd BenDor. Simulation modeling in built environment and physical activity research: current status, gaps, and future directions for improving translation. In Preparation.

Kyle Onda*, Todd K. BenDor, Brooke Ganser*, Nikhil Kaza, Michele Plaugic*, Jordan Branham*, and David Salvesen. Does Removing Federal Subsidies Discourage Development? An Evaluation of the Impact of the U.S. Coastal Barrier Resources Act. In Preparation.

Jordan Branham*, Michael Everhart*, Todd K. BenDor, Nikhil Kaza, and David Salvesen. Investigating the Impact of the US Coastal Barrier Resources Act on Shoreline Hardening. In Preparation.

BenDor, Todd K, Dylan Timmerman, and Sarah Wraight. Transfer of development rights and water quality trading: a comparative assessment for creative, market-based environmental policies. In Preparation.

BenDor, Todd K, Dylan Timmerman, and Sarah Wraight. Predicting the existence and performance of US Water quality trading programs. In Preparation.

TEACHING ACTIVITIES

Courses Taught (All syllabi available at: <http://todd.bendor.org/teaching>)

- PLAN 055: *Freshman Seminar – Sustainable Cities*. Fall 2014 (15 students)
- PLAN 641: *Ecology and Land Use Planning*. Fall 2014 (16 students), Fall 2015 (20 students), Fall 2017, Fall 2018
- PLAN 721: *Advanced Planning Methods*. Spring 2015 (25 students), Spring 2016 (21 students), Spring 2017 (14 students), Spring 2018

- PLAN 722: *Systems Thinking and Modeling for Planners*. Spring 2015 (22 students), Spring 2016 (18 students), Spring 2017 (16 students), Spring 2018
- PLAN 745: *Development Impact Assessment*. Spring 2015 (11 students), Spring 2016 (13 students), Spring 2017 (22 students), Spring 2018
- PLAN 911: *Academic Publishing for Planning Graduate Students*. Fall 2015 (15 students)
- PLAN 911: *Grant and Proposal Writing in Planning*. Spring 2016 (11 students)
- PLAN 911: *Professional Development*. Fall 2018
- Teaching activities at UNC Odum Institute for Research in the Social Sciences: *Introduction to Agent-Based Modeling, Introduction to Systems Thinking and System Dynamics Modeling, Academic Publishing 101* (2014-Present)
- 2015-2016 Instructor in “Data Matters” Data Science Short Course Series” for National Consortium on Data Science: *Simulation Strategies in Data Science: System Dynamics and Agent-based Modeling*

Graduated PhD Advisees

2017: Sierra Woodruff (2011–2017) – “Local climate change adaptation in the United States” [Asst. Prof. at Texas A&M]

Ongoing PhD Advisees

Leah Campbell (2018-Present), Tibor Vegh (2016–Present), Kristen Vitro (2014-2018)

Senior Honors Theses Advisees

2014: Marisa Berry – “Impact of sea level rise on development suitability in New York City.” (*Published as peer reviewed article*)

MCRP Thesis Advisees

2018: Kaley Huston – “From Gas Station To Gastro Pub: The Potential for Petroleum Brownfield Redevelopment through the North Carolina Brownfields Program”

2017: Maureen Devlin – “Before Bike Share: Bolstering the 2014 Bike Plan” (December 2017)

2015: Avery Livengood – “Integrating Green Stormwater Infrastructure into the Built Environment”

Nathaniel Baker – “The Graham 2035 Comprehensive Plan”

Ryan Boivin – “Building a Fact Base for Local Decision Support: A Test of the NC Coastal Federation Watershed Restoration Planning Guidebook”

Mikey Goralnik – “Resource Resiliency: preparing rural America for an uncertain climatic future through community design and ecosystem service provision” **Received UNC City and Regional Planning Best Master’s Project Award and published in short form in The Carolina Planning Journal.*

2014: Daniel Hedglin – “What are the current factors that affect risk distribution and structure around emerging ecosystem service markets in China?”

Fredy Grefa – “Do local comprehensive plans support the Kichwa of the Ecuadorian Amazon in reaching their collective rights?”

2013: Tania Jordanova – “Space/Time Estimation of Fecal Coliform in North Carolina using Land Use Regression to Evaluate the Effectiveness of Stormwater Management Policies” (*Published as peer reviewed article*)

Daniel Widis – “Improving the Mississippi Coastal Improvement Program’s Spatial Decision Support System: A literature review of GIS-based wetland identification and prioritization models” (*Published as peer reviewed article*)

2011: Jeffrey Rissman – “Characterizing the Air Quality and Demographic Impacts of Aircraft Emissions at the Hartsfield-Jackson Atlanta International Airport” **Received UNC City and Regional Planning Best Master’s Project Award – published as two peer reviewed articles and in short form in The Carolina Planning Journal.*

Kathleen Oppenheimer – “Oh the Huge Manatee! Biofouling Poses Sticky Problems for Manatees that Require Attention Under the Federal Endangered Species Act” (*Published as law review article*)

Dylan Sandler – “Assessing the Disaster Recovery Planning Capacity of the State of North Carolina”

2010: Lyle Leitelt – “Developing a Solar Energy Potential Map for Chapel Hill, NC” (*Published as Planning Advisory Service Memo*)

Katherine Hebert – “Keeping it Green: A Study of open Space Conservation Efforts in the Triangle”

Aaron Bland – “Review of University Policies for Sustainability at UNC-Chapel Hill”

Megan Culler – “Recreation, Tourism Development, and Watershed Protection in the Dan River Basin”

- 2009:** Hannah Berg – “Retrofitting Solutions for Urban Stormwater Runoff: A case study of the Jordan Nutrient Strategy” (*Published as peer reviewed article*)
 Nora Lenahan – “Evaluation of Studies Related to Urban Growth and Land Use Models to Incorporate into the Development of a Sustainable Eastern North Carolina” (*Published as peer reviewed article*)
 Chandler Van Schaack - “Can Town and Country Both be Green? A Comparative Study of Green Building Policies and Regulations in Rural Versus Urban Counties in North Carolina.” (*Published as peer reviewed article*)
 Audrey Stewart – “Examining North Carolina’s Environmental Enhancement Program from the Perspectives of Land Use Planning and Social Equity” (*Published as peer reviewed article*)
- 2008:** Zoe Hamstead, MCRP - “Water Quality Trading in the Neuse River Basin: A Case Study of the Neuse River Compliance Association” (*Published as peer reviewed article*)

GRANTS

- 2018-2019: Development of Water Quality Trading Data and Resources to Support Environmental Markets. SSDA Office of Environmental Markets (PI) (\$25,000)
- 2018-2021: RCN: Smart Civic Engagement in Rapidly Urbanizing Regions. NSF Smart & Connected Communities (SCC # 1737563) (Co-PI), (\$41,237, 11.11% effort)
- 2017-2018: Are Floodplain Buyouts a Smart Investment for Local Governments? UNC Policy Collaboratory (Co-PI) (\$75,000, 11.11% effort)
- 2017-2019: “How does removal of infrastructure subsidies alter development? Evaluating the impact of the U.S. Coastal Barrier Resources Act.” NSF Geography and Spatial Sciences (GSS #1660450) (PI) (\$348,507, 11.11% effort)
- 2015-2019: Salinization of the inland coastal plain through saltwater intrusion: landscapes in transition along the leading edge of climate change.” NSF Coastal SEES (#1427188) (Co-PI) (\$357,340 total amount, 11.11 % effort)
- 2013: “The Restoration Economy.” The Conservation Fund (PI) (\$10,000, 0% effort)
- 2013-2014: “A National Survey of Jobs Associated with The Restoration Economy.” Blue Moon Fund (PI) (\$58,000, 6.3% effort)
- 2013: “Understanding and Exploring the Restoration Economy.” Walton Family Fund (PI) (\$30,000, 4% effort)
- 2012 – 2014: “Ecosystem Services as an Alternative Foundation for Development, Urban Planning, and New Water Infrastructure in the U.S.” National Academies Keck Futures Initiative (NAKFI) (Co-PI) (\$25,694, 5.2% effort)
- 2010 – 2012: “Decision Support System Frameworks for Eastern North Carolina.” DoD Southeast Regional Partnership for Planning and Sustainability Program (SERPAS) (Co-PI) (\$50,000, 5% effort)
- 2010 – 2013: “Hierarchical Analysis of Socio-Ecological Interactions in the Charlotte Metropolitan Region: Can Urbanization, Forest and Working Lands Coexist?” NSF ULTRA-Ex (#0949170) (Co-PI). (\$13,966, 5.55% effort)
- 2010 – 2012: “Reconciling Human and Natural Systems for the Equitable Provision of Ecosystem Services in the Triangle of North Carolina.” NSF Ultra-Ex (#0948181) (Senior personnel) (\$92,903, 0% effort)
- 2010: “Urban Growth and Environmental Markets to Achieve Pollution Neutrality.” UNC Junior Faculty Development Grant (PI) (\$7,500, 0% effort)
- 2008 – 2010: “Academic Workshop Follow-up: Research to Promote a Sustainable Southeast.” DoD Southeast Regional Partnership for Planning and Sustainability Program (SERPAS) (Co-PI) (\$64,685, 7.5% effort)
- 2009 – 2010: “Academic Workshop Follow-up: Research to Promote a Sustainable Southeast.” DoD Southeast Regional Partnership for Planning and Sustainability Program (SERPAS) (Co-PI) (\$55,120, 8% effort)
- 2009 – 2011 “Does Environmental Restoration increase Land Values and Tax Base?: Wetlands as a New Type of Infrastructure Amenity.” UNC University Research Council Grant (PI) (\$5,000, 0% effort)
- 2009 – 2009 GlaxoSmithKline Faculty Fellowship. Institute for Emerging Issues, NC State University (PI) (\$15,000, 0% effort)
- 2008 – “Assessment of North Carolina Ecosystem Enhancement Program.” UNC Institute of the Environment, Center of Landscape Change and Health (PI) (\$7,000, ~6% effort)
- 2007 – “Urban Land Use Modeling Feasibility Study for North Carolina.” Renaissance Computing Institute (RENCI). (PI) (\$7,200, 8.3% effort)

PROFESSIONAL SERVICE

Department of City and Regional Planning (UNC-Chapel Hill) Service

- Director of Graduate Studies (MCRP 2013-2015; PhD 2015-Present)
- Director of Land Use and Environmental Planning Specialization (2013-Present)

- Associate Director of City and Regional Planning PhD Program (2012-2013)

UNC- Chapel Hill Service

- Director (Interim), Odum Institute for Research in Social Science (Fall 2018-Present)
- Member, UNC Buildings and Grounds Committee (Fall 2017-Present)
- Member, Evaluation Committee for Odum Institute for Research in the Social Sciences (2016)
- Faculty Advisor, Students for the New Urbanism/Carolina Urbanists, UNC Student Group (2012-2014); Epsilon Eta, Co-Ed Environmental Honors Fraternity, UNC Alpha Chapter (2009-2010); Carolina Home Brewers (2014-2016)

Disciplinary Service

- Editorial board, *Landscape and Urban Planning* (2018-Present)
- Track Chair, Resources, *Annual International System Dynamics Conference* (2017-Present)
- Associate Editor, *Environmental Science and Policy* (2016-2018)
- Member, EPA Board of Scientific Counselors (BOSC) Sustainable & Healthy Communities Subcommittee (2014-2017)
- Member, Scientific Review Committee, *National Socio-Environmental Synthesis Center* (SESYNC) (2013-2018)
- Member, Advisory Board for the System Dynamics Major, *Worcester Polytechnic Institute* (2008-2011)
- Advisor, Land Use Impact Assessment Team, *State of North Carolina Sea Level Rise Risk Management Study* (2007-2008)
- Reviewer for many journals, including (but not limited to): *Journal of the American Planning Association*, *Luxembourg FNR (NSF Grant-making equivalent)*, *Portuguese Foundation for Science and Technology (FCT; Portuguese Research Council)*, *Diversity and Distributions*, *Journal of Planning Education and Research*, *Environmental Management*, *Journal of Environmental Management*, *Ecological Modeling*, *Ecological Economics*, *Biological Conservation*, *Environmental Management Review*, *System Dynamics Review*, *Ecological Restoration*, *Ecological Applications*, *Ecological Engineering*, *Landscape Ecology*, *Journal of Environmental Planning and Management and Ecology*, and others.
- Facilitator, 2009 Emerging Issues Forum, *N.C. State University Institute for Emerging Issues*
- Community Facilitator for Champaign County “big.small.all” visioning and planning project, 2006-2007
- Facilitator for UIUC Graduate College Workshop (2007), “Three Magic Letters: Getting to Ph.D.: A Symposium for Graduate Faculty, Students, and Alumni.”
- Professional memberships: *International System Dynamics Society*, *American Planning Association*, *Ecosystem Services Partnership (Foundation for Sustainable Development)*