

Modeling Behavioral Change in Socio-Environmental Systems Webinar: List of Publications Mentioned

June 20, 2022

Publications mentioned in Jonathan Gilligan's talk "Incorporating Behavior in Socio-Environmental Systems Modeling"

(Please note the asterisks denote papers that explicitly focus on socio-environmental systems modeling.)

* Alexander, S., & Block, P. (2022). Integration of seasonal precipitation forecast information into local-level agricultural decision-making using an agent-based model to support community adaptation. *Climate Risk Management*, 36, 100417. <https://doi.org/10.1016/j.crm.2022.100417>.

Amrith, S. S. (2013). *Crossing the Bay of Bengal*. Harvard University Press. <https://doi.org/10.14296/RiH/2014/2042>.

* Beckage, B., Gross, L. J., Lacasse, K., Carr, E., Metcalf, S. S., Winter, J. M., Howe, P. D., Fefferman, N., Franck, T., Zia, A., Kinzig, A., & Hoffman, F. M. (2018). Linking models of human behaviour and climate alters projected climate change. *Nature Climate Change*, 8(1), 79–84. <https://doi.org/10.1038/s41558-017-0031-7>.

* Beckage, B., Lacasse, K., Winter, J. M., Gross, L. J., Fefferman, N., Hoffman, F. M., Metcalf, S. S., Franck, T., Carr, E., Zia, A., & Kinzig, A. (2020). The Earth has humans, so why don't our climate models? *Climatic Change*. <https://doi.org/10.1007/s10584-020-02897-x>.

* De Koning, K., Filatova, T., & Bin, O. (2019). Capitalization of Flood Insurance and Risk Perceptions in Housing Prices: An Empirical Agent-Based Model Approach. *Southern Economic Journal*, 85(4), 1159–1179. <https://doi.org/10.1002/soej.12328>.

Dietz, T., Gardner, G. T., Gilligan, J., Stern, P. C., & Vandenbergh, M. P. (2009). Household actions can provide a behavioral wedge to rapidly reduce U.S. carbon emissions. *Proceedings of the National Academy of Sciences*, 106(44), 18452–18456. <https://doi.org/10.1073/pnas.0908738106>.

* Gilligan, J. M. (2018). Climate modeling: Accounting for the human factor. *Nature Climate Change*, 8(1), 14. <https://doi.org/10.1038/s41558-017-0038-0>.

- Gromet, D. M., Kunreuther, H., & Larrick, R. P. (2013). Political ideology affects energy-efficiency attitudes and choices. *Proceedings of the National Academy of Sciences*, 110(23), 9314–9319. <https://doi.org/10.1073/pnas.1218453110>.
- * Janssen, M. A. (2016). Impact of diverse behavioral theories on environmental management: Explorations with Daisyworld. *2016 Winter Simulation Conference (WSC)*, 1690–1701. <https://doi.org/10.1109/WSC.2016.7822217>.
- Mallick, B., Rogers, K. G., & Sultana, Z. (2022). In harm’s way: Non-migration decisions of people at risk of slow-onset coastal hazards in Bangladesh. *Ambio*, 51(1), 114–134. <https://doi.org/10.1007/s13280-021-01552-8>.
- * McNamara, D. E., & Keeler, A. (2013). A coupled physical and economic model of the response of coastal real estate to climate risk. *Nature Climate Change*, 3(6), 559–562. <https://doi.org/10.1038/nclimate1826>.
- * Moore, F. C., Lacasse, K., Mach, K. J., Shin, Y. A., Gross, L. J., & Beckage, B. (2022). Determinants of emissions pathways in the coupled climate–social system. *Nature*, 603(7899), 103–111. <https://doi.org/10.1038/s41586-022-04423-8>.
- * Muelder, H., & Filatova, T. (2018). One theory-many formalizations: Testing different code implementations of the theory of planned behaviour in energy agent-based models. *Journal of Artificial Societies and Social Simulation*, 21(4), 5. <https://doi.org/10.18564/jasss.3855>.
- Nielsen, K. S., Stern, P. C., Dietz, T., Gilligan, J. M., van Vuuren, D. P., Figueroa, M. J., Folke, C., Gwozdz, W., Ivanova, D., Reisch, L. A., Vandenbergh, M. P., Wolske, K. S., & Wood, R. (2020). Improving Climate Change Mitigation Analysis: A Framework for Examining Feasibility. *One Earth*, 3(3), 325–336. <https://doi.org/10.1016/j.oneear.2020.08.007>.
- Noll, B., Filatova, T., & Need, A. (2020). How does private adaptation motivation to climate change vary across cultures? Evidence from a meta-analysis. *International Journal of Disaster Risk Reduction*, 46, 101615. <https://doi.org/10.1016/j.ijdrr.2020.101615>.
- * Taberna, A., Filatova, T., Roy, D., & Noll, B. (2020). Tracing resilience, social dynamics and behavioral change: A review of agent-based flood risk models. *Socio-Environmental Systems Modelling*, 2, 17938–17938. <https://doi.org/10.18174/sesmo.2020a17938>.
- * Thober, J., Schwarz, N., & Hermans, K. (2018). Agent-based modeling of environment-migration linkages: A review. *Ecology and Society*, 23(2). <https://doi.org/10.5751/ES-10200-230241>.

Yuriev, A., Dahmen, M., Paillé, P., Boiral, O., & Guillaumie, L. (2020). Pro-environmental behaviors through the lens of the theory of planned behavior: A scoping review. *Resources, Conservation and Recycling*, 155, 104660. <https://doi.org/10.1016/j.resconrec.2019.104660>.

Publications mentioned in Marco Janssen's talk "Mental Models as Agents for Change"

Bojórquez-Tapia, L. A., Janssen, M. A., Eakin, H., Baeza, A., Serrano Candela, F., Gómez-Priego, P., & Miquelajauregui Y. (2019). Spatially explicit simulation of two-way coupling of complex socio-ecological systems: Socio-hydrological risk and decision making in Mexico City. *Socio-Environmental Systems Modelling*, 1. <https://doi.org/10.18174/sesmo.2019a16129>.

Janssen, M. A., & de Vries, B. J. M. (1998). The battle of perspectives: a multi-agent model with adaptive responses to climate change. *Ecological Economics* 26(1): 43-65. [https://doi.org/10.1016/S0921-8009\(97\)00062-1](https://doi.org/10.1016/S0921-8009(97)00062-1).

Schlüter, M., Baeza, A., Dressler, G., Frank, K., Groeneveld, J., Jager, W., Janssen, M.A., McAllister, R. R. J., Müller, B., Orach, K., Schwarz, N. & Wijermans, N.(2017). A framework for mapping and comparing behavioral theories in models of social-ecological systems. *Ecological Economics*, 131: 21-35. <https://doi.org/10.1016/j.ecolecon.2016.08.008>.

Publication mentioned in Katherine Lacasse's talk "Putting People into Climate Models"

Moore, F. C., Lacasse, K., Mach, K. J., Shin, Y. A., Gross, L. J., & Beckage, B. (2022). Determinants of emissions pathways in the coupled climate–social system. *Nature*, 603(7899), 103-111. <https://doi.org/10.1038/s41586-022-04423-8>.

Publications mentioned in Firouzeh Taghikhah's talk "How Models Are Used to Examine Behavioral Change"

Muelder, H., & Filatova, T. (2018). One Theory - Many Formalizations: Testing Different Code Implementations of the Theory of Planned Behaviour in Energy Agent-Based Models. *Journal of Artificial Societies and Social Simulation* 21(4). <https://doi.org/10.18564/jasss.3855>.

Taghikhah, F., Filatova, T., & Voinov, A. (2021). Where Does Theory Have It Right? A Comparison of Theory-Driven and Empirical Agent Based Models. *Journal of Artificial Societies and Social Simulation* 24(2). <https://doi.org/10.18564/jasss.4573>.

Taghikhah, F., Voinov, A., Shukla, N., & Filatova, T. (2020). Exploring consumer behavior and policy options in organic food adoption: Insights from the Australian wine sector. *Environmental Science & Policy* 109: 116–124. <https://doi.org/10.1016/j.envsci.2020.04.001>.

Taghikhah, F., Voinov, A., Shukla, N., Filatova, T., & Anufriev, M. (2021). Integrated modeling of extended agro-food supply chains: A systems approach. *European Journal of Operational Research* 288(3): 852–868. <https://doi.org/10.1016/j.ejor.2020.06.036>.

Publications mentioned in Gilberto Montibeller’s talk “Behavioural Challenges in the Evaluation of Policy Options”

Franco, L. A., & Montibeller, G. (2010). Facilitated modelling in operational research. *European Journal of Operational Research*, 205(3): 489-500. <https://doi.org/10.1016/j.ejor.2009.09.030>.

Montibeller, G. (2018). Behavioral Challenges in Policy Analysis with Conflicting Objectives. In *Recent Advances in Optimization and Modeling of Contemporary Problems*, 85–108. INFORMS Tutorials in Operations Research. INFORMS. <https://doi.org/10.1287/educ.2018.0182>.

Montibeller, G. (2022). *Decision Making for Enhanced Health Security: Managing Emerging Health Threats, Making Reasoned Choices, and Allocating Scarce Resources* (Vol. 328). International Series in Operations Research & Management Science. Springer Cham. <https://doi.org/10.1007/978-3-030-98132-7>.

Montibeller, G., & von Winterfeldt, D. (2015). Cognitive and Motivational Biases in Decision and Risk Analysis. *Risk Analysis*, 35(7): 1230–51. <https://doi.org/10.1111/risa.12360>.

Montibeller, G., & von Winterfeldt, D. (2018). Individual and Group Biases in Value and Uncertainty Judgments. In L. C. Dias, A. Morton, and J. Quigley (Eds.), *Elicitation* (pp. 377–92). International Series in Operations Research & Management Science. Springer, Cham. https://doi.org/10.1007/978-3-319-65052-4_15.