

Todd Schenk, Ph.D., M.C.P.
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Collaborative Governance • Environmental Policy & Planning • Climate Change Adaptation
Sustainability • Civil Discourse • Serious Games

Current position:

Virginia Tech School of Public and International Affairs (Blacksburg, Virginia)

Associate Professor of Urban Affairs and Planning, 2021 - present

Founding Director, Science, Technology & Engineering in Policy (STEP) program

Faculty Affiliate, Global Change Center; Center for Coastal Studies; and Fralin Life Sciences Institute

Assistant Professor of Urban Affairs and Planning, 2015 - 2021

- *Current research:* Joint fact-finding in science-intensive disputes; collaboration at the science-policy interface; water quality; endangered and invasive species; methods to increase empathy and understanding; renewables siting; serious games; increasing statistical understanding. Currently a co-PI on three externally funded (NSF) grants (VT PI on one) and PI on three internal (VT) grants
- *Teaching:* Decision Making, Reflective Practice, & Engagement in STEM-H Domains; Planning Theory & History; Collaborative Planning and Community Involvement; Sustainable Policy Making and Planning in Europe (study abroad); Introduction to Environmental Policy and Planning; studios
- *Advising:* Supported 1 Ph.D. & 16 Master's students (3 theses – 1 in 2021) to completion as chair or co-chair and served as committee member for an additional 6 Ph.D. & 11 Master's completed (on committee for 3 Ph.D.'s defended in 2021). Currently serving chair or co-chair for 4 Ph.D. students and 3 Master's students and serving on committees of additional 7 Master's students and 5 Ph.D. students. Committee service in 7 departments (SPIA (UAP, CPAP & GIA); Civil & Environmental Engineering; Science, Technology & Society; Political Science; Forest Resources & Environmental Conservation; Agricultural, Leadership, and Community Education; Performing Arts)
- *Current service:* President – CAUS Faculty Association; Chair – CAUS Review & Engagement Committee; Member – VT Faculty Senate; Member - Commission on Faculty Affairs; Member and Chair of Curriculum Committee - Policy Destination Area Stakeholder Group; Member - Center for Communicating Science Advisory Board; Faculty Advisor – Science Policy Education and Advocacy Club (SPEAC)

Education:

Massachusetts Institute of Technology (Cambridge, Massachusetts)

PhD in Public Policy and Planning, 2015

- *Dissertation:* Institutionalizing Uncertainty: Exploring how infrastructure stakeholders can prepare for uncertain climate futures. Cases in Rotterdam, Singapore and Boston
- *Exam fields:* Public Policy; Sustainability in Theory and Practice
- *Committee:* Prof. Lawrence Susskind (MIT, chair), Prof. Adil Najam (Boston University – Pardee School of Global Studies), and Prof. Richard de Neufville (MIT – Engineering Systems Division)

Master in City Planning, 2009 (GPA 4.8/5.0)

- *Specialization:* Environmental Policy & Planning
- *Master's thesis:* Climate change-induced resettlement
- *Other key projects:* MIT D-Lab in Qinghai, China; practicum on urban climate adaptation in eThekweni (Durban), South Africa

University of Guelph (Guelph, Ontario, Canada)

Honors Bachelor of Arts, 2002

- Geography (major) and International Development (minor)

Teaching & Curriculum Development Experience:

- **Science, Technology & Engineering in Policy (STEP) Graduate Certificate, Director**
Virginia Tech Policy Destination Area, new program for STEM-H graduate students
Developed certificate, co-developed core course proposals, and leading implementation
- **Policy Gateway: Policy and Decision Making in STEM-H Domains, Instructor** (fall 2021)
Virginia Tech, core course in new STEP program
- **Decision Making, Reflective Practice, and Engagement in STEM-H Domains, Developed & Instructor** (spring 2021 – present)
Virginia Tech, new graduate course at core of STEP program. Taught for first time in 2021 with 23 students from a wide range of disciplines
- **The Science, Policy, and Management of Invasive Species, Developed & Instructor** (spring 2021 – present)
Virginia Tech, new seminar course for the community of graduate students, faculty, and staff working on invasive species issues
- **Data and the Art of Policy-Making & Planning, Developed** (taught by colleague)
Virginia Tech, new undergraduate pathways course on critically assessing big data
- **Collaborative Policy-Making and Planning, Developed & Instructor** (fall 2015 - present)
Virginia Tech, new undergraduate pathways course on engagement in theory and practice
- **Collaborative Planning & Community Involvement, Instructor** (fall 2015 – present)
Virginia Tech, graduate course on engagement models for planners and others
- **Environmental Policy and Planning, Instructor** (fall 2016 – present)
Virginia Tech, undergraduate introductory course for students from various disciplines
- **Sustainable Policy Making and Planning in Europe, Instructor** (Summer 2016 - present)
Virginia Tech, graduate and undergraduate study abroad program
- **Environmental Planning Studio** (Spring 2018)
Graduate level studio with retirement home developer Smith/Packett to consider integration of sustainability into their facilities
- **Ph.D. Colloquium** (Fall 2017, Spring 2018)
PhD students share their work and learn about special topics, like academic publishing
- **Urban Development Project Review Studio** (Spring 2017)
Virginia Tech, graduate level studio focused on campus planning for ‘creativity and innovation’
- **Art and Science of Negotiation, Instructor** (Spring 2014 and Spring 2015) and **TA** (2012)
Massachusetts Institute of Technology, Undergraduate negotiation course
- **Negotiation and Dispute Resolution in the Public Sector, TA** (2011 and 2012)
Massachusetts Institute of Technology, graduate-level negotiation and facilitation course
- **Negotiation in Scientific and Technical Fields, Co-Instructor** (Summer 2013)
Massachusetts Institute of Technology, executive education course
- **Climate Change and Sustainable Land-Water Management, Instructor** (2011)
Arab Water Academy and World Bank Institute, executive education course for govt. officials

- **Local Communities Adapting to Climate Change: Managing Risk in Decision Making** (2009 - 2011) *Lincoln Institute and Consensus Building Institute, executive education*
- **Course for Sustainability: Strategies, Methodologies, Policies and Actions for Central and Eastern Europe, Instructor and Project Manager** (2005 - 2007)
Regional Environmental Center for CEE, Venice International University, and the Italian Ministry for the Environment, Land and Sea, course for senior government officials
- **Junior Fellows/Young Environmental Leaders Programme, Instructor** (2003 - 2007)
Regional Environmental Center for Central and Eastern Europe, program for young NGO leaders
- **Invited guest lectures** at the University of Tennessee, Knoxville; University of Eastern Finland; University of Tokyo, Boston University, Technical University of Ostrava (Czech Republic), and the University of Massachusetts – Lowell

Previous Professional Experience:

MIT Science Impact Collaborative – A research team developing and testing innovative ways to manage science-intensive environmental policy questions.

Assistant Director, 2013-2014

- Co-organized various events, including a workshop on the use of serious games for teaching and research, and a devising seminar on Arctic fisheries with senior stakeholders
- Represented the initiative in various forums

The Consensus Building Institute (Cambridge, Massachusetts) - CBI is a leading organization in the fields of negotiation and dispute resolution.

Senior Consultant (part-time), 2007 – 2013

- Developed and delivered various trainings. For example, a lecture and exercise on climate change negotiations for senior civil servants from across the Middle East and North Africa
- Prepared numerous role-play simulation exercises. For example, an exercise on climate change adaptation planning for civil servants and other key stakeholders involved in the Ghanaian hydroelectricity sector
- Coordinated the *Local Communities Adapting to Climate Change: Managing Risk in Decision Making* course for local government officials. Developed an online version
- Worked on various mediation and facilitation projects, including the *Connecticut River Watershed Project Assessment Report* and the *Cambridge Climate Emergency Congress*
- Completed a working paper for the Lincoln Institute of Land Policy on sea level rise adaptation

The Regional Environmental Center for Central and Eastern Europe (Hungary) – The REC is an international organization working in 17 Central and Eastern European countries

Project Manager, NGO Support and Capacity Building Programmes, April 2005 – July 2007

- Managed the *Course for Sustainability: Strategies, Methodologies, Policies and Actions for Central and Eastern Europe*, an intensive training program for senior civil servants from across the region. Supervised and supported the project team. Lectured on urban sustainability, and coordinated and worked with other lecturers
- Worked on various other projects strengthening both government and civil society organizations
- Administered regional grants for NGOs, particularly in the Balkans region
- Developed new project proposals for various donors

Project Officer, NGO Support Programme, March 2003 – April 2005

- Facilitated training sessions for *Young Environmental Leaders* from CEE and managed the REC's internship program
- Administered grants and monitored and evaluated the financial aspects of projects
- Developed a community-based social marketing project for NGOs

Assistant to the Deputy Executive Director, March 2003 – February 2004

Social Marketing and Communications Officer, Information Programme, September 2002 – March 2003

Grants & Grant Applications:

Externally Funded

NRT-HDR: Convergence at the Interfaces of Policy, Data Science, Environmental Science and Engineering to Combat the Spread of Antibiotic Resistance (CIP-CAR). National Science Foundation, \$3,000,000. *Active: 09/01/2021 - 08/31/2026. Co-PI*

CNH2-S: Scrambled responsibilities - species conservation and collaborative governance in an era of global change. National Science Foundation, \$731,175 (\$169,666 to VT). *Active: 04/01/2021 - 07/31/2024. Co-PI (PI for VT portion)*

GCR: Common Pool Resource Theory as a Scalable Framework for Catalyzing Stakeholder-Driven Solutions to the Freshwater Salinization Syndrome. National Science Foundation, \$3,600,000 (\$2,034,934 to VT). *Active: 09/01/2020 - 08/31/2025. Co-PI*

Internally Funded (active in 2021 only)

Creativity, Arts & Technology to Build Civility, Institute for Creativity, Arts, and Technology (ICAT), \$24,904. *Active: 07/01/2020 - 05/31/2022. PI*

Sustainable Renewable Energy & Agrovoltatics Development Proposal. Center for Coastal Studies SEED Grant, \$14,500, *Active: 07/31/2020 - 07/01/2021. Co-PI*

Advancing Invasive Species Science, Policy & Management: Learning From and Coordinating Among North American Centers. Virginia Tech Policy Destination Area, \$12,000. *Active: 11/01/2019 – Present. PI*

Dynamic Data Visualization to Improve Foundational Statistical Understanding. 4-VA, \$98,050. *Active: 11/21/2018 – present. PI*

Virginia Tech Invasive Species Working Group. Fralin Life Sciences Institute, \$246,000 *Active: 12/01/2020 - 12/31/2022. Co-PI*

Other Submitted (2021 only)

DISES: Managing Invasive Species as a Socio-Environmental System - Stakeholder Perspectives, Ecological Impacts, and Collaborative Action. National Science Foundation, \$1,600,000 **(Pending). Co-PI**

URoL: EN Elucidating the socio-ecological networks of an invaded world. National Science Foundation, \$2,999,132 **(Declined). Co-PI**

EAGER: SAI: Siting Equity in American Infrastructure: A Co-Production Model for Renewable Energy Facilities Siting. National Science Foundation, \$299,965 **(Declined). PI**

Publications:

Conference and Other Presentations (2021 ONLY)

Barney, J., Lakoba, V., Haak, D., Salom, S., Schenk, T., & Brown, B. (2021). *Bridging the knowing-doing gap in the science, policy, and management of invasive species*. In Weed Science Society of America.

Schenk, T., Rippey, M., & Grant, S. (2021). *Bridging the Science-Stakeholder Divide in Environmental Policy & Planning: A Convergent Approach to Addressing Freshwater Salinization*. In Association of Collegiate Schools of Planning 2021 Annual Conference. **Conference presentation**

Schenk, T. (2021). *Serious Games: A Tool to Advance Transdisciplinary Collaboration*. In Science of Team Science and the Human Condition - 12th Annual International Science of Team Science (SciTS) Conference. **Conference workshop**

Schenk, T. (2021). *Climate Justice*. In Association of Collegiate Schools of Planning 2021 Annual Conference. **Discussant**

Schenk, T., Surmanek, C., Paliana, D., & Leonard, R. (2021). *Creativity, Arts, and Technology to Build Civility*. Institute for Creativity, Arts, and Technology (ICAT). **Invited presentation**

Schenk, T. (2021). *Joint Fact-Finding: Approaches to Bridge the Science-Policy Interface as we Tackle Wicked Problems*. University of Tennessee, Knoxville. **Invited keynote**

Schenk, T. (2021). *Comparing & Contrasting European & American Environmental & Sustainability Policies & Outcomes*. Contribution to the EU-Virginia Connections: Bring Europe Alive For Your Students conference Center for European Union, Transatlantic & Trans-European Space Studies. **Invited panel presentation**

Hardwig, G., Raun, P., Drum, M., Schenk, T., & Ginn, R. (2021). *Arts and the Anthropocene Panel*. Moss Arts Center at Virginia Tech. **Invited panel presentation**

Schenk, T. (2021). *Civil Discourse in a Time of Discontent: Reflections on and Techniques for Engaging Across Difference*. Leadership and Social Change Residential College at Virginia Tech. **Invited presentation**

Schenk, T. (2021). *Dialogue Across Difference: Effectively communicating with those that question DEI initiatives*. Housing & Residential Life Staff, VT. **Invited workshop**

Schenk, T. (2021). *Cities: The Engineered vs. The Organic*. Honors Residential Commons FaculTea, Virginia Tech. **Invited presentation**

Schenk, T. (2021). *Climate Change: Why it matters and what we can do about it in the Roanoke & New River Valleys*. Kiwanis Club of Roanoke. **Invited keynote**

Books

Schenk, T. (2018). *Adapting Infrastructure to Climate Change: Advancing decision-making under conditions of uncertainty and complexity*. London and New York: Routledge.

Matsuura, M. & T. Schenk, eds. (2017). *Joint Fact Finding in Urban Planning and Environmental Disputes*. London and New York: Routledge.

Journal Articles

Bhide, S.V., S.B. Grant, E.A. Parker,... T. Schenk (2021). Addressing the contribution of indirect potable reuse to inland freshwater salinization. *Nature Sustainability*, 4: 699–707. <https://doi.org/10.1038/s41893-021-00713-7>

Yeganeh, A., A. McCoy, P. Agee, T. Schenk & S. Hankey (2021). Green housing or green gentrification?

Schenk, T., D. Rumore & H.-J. Seo (in progress). Assessing the State of Stakeholder Assessment in Practice. *Conflict Resolution Quarterly*.

- Schenk, T., J.N. Barney, D.C. Haak, S. Salom, B. Brown & V. Lakoba (in progress). Advancing Coordination on Invasives Management: Lessons Learned from Virginia.
- Schenk, T. (in progress). Deliberating on Behalf of Others: Exploring the tension between representation and deliberation. *Negotiation Journal*.
- Yeganeh, A.J., A.P. McCoy & T. Schenk (2020). Determinants of climate change policy adoption: A meta-analysis. *Urban Climate*, 31: 100547.
- Barney, J.N., T. Schenk, D.C. Haak, S. Salom, B. Brown & E.R. Hotchkiss (2019). Building Partnerships and Bridging Science and Policy to Address the Biological Invasions Crisis. *Invasive Plant Science and Management*, 1-5. doi:10.1017/inp.2018.33
- Chu, E., T. Schenk & J. Patterson (2018). The Dilemmas of Citizen Inclusion in Urban Planning and Governance to Enable a 1.5 °C Climate Change Scenario. *Urban Planning*, 3(2): 128–140.
- Edelenbos, J., I. van Meerkerk & T. Schenk (2018). The Evolution of Community Self-Organization in Interaction With Government Institutions: Cross-Case Insights From Three Countries. *American Review of Public Administration*, 48(1), 52-66. doi:10.1177/0275074016651142.
- Eriksen, C., E.E. Hudson-Doyle, R. Alaniz, C. Adler, T. Schenk & S. Vallance (2018). Embodied uncertainty: living with complexity and natural hazards. *Journal of Risk Research*, 21(3): 290-307.
- Rumore, D., T. Schenk & L. Susskind (2016). Role-play simulations: A tool for climate adaptation education and engagement. *Nature Climate Change*, 6: 745-750.
- Shi, L., E. Chu, I. Anguelovski, A. Aylett, J. Debats, K. Goh, T. Schenk, K.C. Seto, D. Dodman, D. Roberts, J.T. Roberts & S.D. VanDeveer (2016). Roadmap towards justice in urban climate adaptation research. *Nature Climate Change*, 6: 131–137.
- Schenk, T., R.A.L. Vogel, N. Maas & L. Tavasszy (2016). Joint Fact-Finding in Practice: Review of a Collaborative Approach to Climate-Ready Infrastructure in Rotterdam. *European Journal of Transport and Infrastructure Research*, 16(1): 273-293.
- Susskind, L. & T. Schenk (2014). Can Games Really Change the Course of History? *Négociations*, 2(22): 29-39.
- World Social Science Fellows on Risk Interpretation and Action (2014). Reporting on the Seminar – Risk Interpretation and Action (RIA): Decision Making Under Conditions of Uncertainty. *Australasian Journal of Disaster and Trauma Studies*. 18 (1), pp. 27-37.
- Schenk, T. & L.C. Stokes (2013). The Power of Collaboration. *IEEE Power & Energy*, May/June: 56-65.
- Bollinger, L.A., C.W.J. Bogmans, E.J.L. Chappin, G.P.J. Dijkema, J.N. Huibregtse, N. Maas, T. Schenk, M. Snelder, P. van Thienen, S. de Wit, B. Wols & L.A. Tavasszy (2013). Climate Adaptation of Interconnected Infrastructures: A Framework for Supporting Governance. *Regional Environmental Change*, 13(1); DOI: 10.1007/s10113-013-0428-4.
- Susskind, L., A. Camacho & T. Schenk (2011). A Critical Assessment of Collaborative Adaptive Management in Practice. *Journal of Applied Ecology*, doi: 10.1111/j.1365-2664.2011.02070.x.
- Susskind, L., A. Camacho & T. Schenk (2010). Collaborative Planning and Adaptive Management in Glen Canyon: A Cautionary Tale. *Columbia Journal of Environmental Law*, vol. 35, vo. 1.

Book Chapters

- Meyers, R., P. Miller, T. Schenk, W.M. Ford, R.F. Hirsh, S. Klopfer, A. Marathe, A. Seth & M.J. Stern (2021). A framework for sustainable siting of wind energy facilities: Economic, social, and environmental factors. *Energy Impacts: Coordinating Research on the Social Impacts of Energy Development*. University Press of Colorado.

- Chu, E. & T. Schenk (2017). Communicating About Climate Change With Urban Populations and Decision-Makers. *Oxford Research Encyclopedia of Climate Science*. <http://climatescience.oxfordre.com/view/10.1093/acrefore/9780190228620.001.0001/acrefore-9780190228620-e-413>.
- Schenk, T., E. Czaika, D. Rumore & M. Russo (2016). Joint fact-finding: An approach for advancing interactive governance when scientific and technical information is in question. *Critical Reflections on Interactive Governance*. L. Edelenbos and I. van Meerkerk, eds. Cheltenham, UK: Edward Elgar Publishing.
- Schenk, T. & L. Susskind (2015). Using role-play simulations to encourage adaptation: Serious games as tools for action research. *Action Research for Climate Change Adaptation: Developing and applying knowledge for governance*. A. van Buuren, J. Eshuis and M. van Vliet, Eds. London and New York: Routledge.
- Schenk, T. (2014). Boats and Bridges in the Sandbox: Using Role Play Simulation Exercises to Help Infrastructure Planners Prepare for the Risks and Uncertainties Associated With Climate Change. *Infranomics: Sustainability, Engineering Design and Governance*. A.V. Gheorghe, M. Masera and P.F. Katina, eds. Berlin, Germany: Springer.
- Juras, A. & T. Schenk (2005). Budapest Sewage Works: Partial privatization of a Central European Utility. *Limits to Privatization: How to Avoid Too Much of a Good Thing*. E.U. von Weizsäcker, O.R. Young and M. Finger, Eds. London and Sterling, VA: Earthscan, pp 34-39.
- Juras, A. & T. Schenk (2005). Union Miniere Pirdop Copper, Bulgaria: A case of privatization and the environment. *Limits to Privatization: How to Avoid Too Much of a Good Thing*. E.U. von Weizsäcker, O.R. Young and M. Finger, Eds. London and Sterling, VA: Earthscan, pp 47-50.

Other Articles & Publications

- Schenk, T. & E. Buchanan (2016, Oct 12). Making Frenemies: Virginia Tech project aims to facilitate more civil discourse among the utterly opposed. *Roanoke Times*.
- Schenk, T. & O. Ferguson (2012). *Coastal States' Climate Adaptation Initiatives: Sea Level Rise and Municipal Engagement*. Lincoln Institute of Land Policy Working Paper, WP12TS1.
- Schenk, T., D. Plumb & E. Paul (2011). Preparing Through Simulation: Using Role-Play Exercises to Incorporate Climate Risks Into Decision-Making. *Practical Solutions for a Warming World: American Meteorological Society Conference on Climate Adaptation*, July 2011.
- Schenk, T. (2008, April). Assessing the State of Conflict Assessment. *CBI Reports*, April, 2008.
- Filcak, R., T. Schenk & R. Atkinson (2006). *Sustainability in Action: NGO Initiatives for Sustainable Development in the Western Balkans*. Szentendre, Hungary: The Regional Environmental Center for Central and Eastern Europe.
- Schenk, T. (2006, October). The Road to Suburbia. *The GreenHorizon*, vol. 3, no. 3, 15.
- Schenk, T. (2006, August). Chewing Slowly in CEE. *Diversity*, vol. 2, no. 4, 14.
- Simpson, J., T. Schenk & G. Krzywkowska (2003). *Snapshot of Environmental Information Systems in South Eastern Europe: Current Progress and Future Priorities*. Szentendre, Hungary: The Regional Environmental Center for Central and Eastern Europe.

Awards and Fellowships:

- VT College of Architecture and Urban Studies Certificate for Excellence in Outreach (2020)
- Faculty/Staff Civility award, Virginia Tech Student Affairs (2019)
- Institute for Society, Culture & Environment Scholars Grant (2018-2019)
- Graduate Research Fellow, Program on Negotiation at Harvard Law School (2014-2015)

- World Social Science (ISSC) Risk Interpretation and Action Fellow (New Zealand, 2013)
- Martin Family Society Fellow for Sustainability, MIT (2012-2013)
- O. Robert Simha Prize for Outstanding Work in Planning Affecting Cambridge, MA or Higher Education (2009)
- MIT Presidential Fellow (2009-2010)
- Grants and support from the Dutch Knowledge for Climate research program, Program on Negotiation at Harvard Law School, and the Water Diplomacy Program at Tufts

Key Leadership and Voluntary Activities (in 2021):

- President of College of Architecture & Urban Studies Faculty Association (CAUS-FA)
- Chair of Provost's Review & Engagement Committee (CAUS-REC)
- Member of Commission on Faculty Affairs
- Member of Energy & Sustainability Committee
- Co-leading development of proposal for a new Climate Action Living Laboratory (CALL), and co-organized CALL Faculty Retreat (September 2021)
- Founding Director of Science, Technology & Engineering in Policy (STEP) program. STEP graduate certificate approved by SCHEV in 2021
- Member of Policy Destination Area Stakeholder Committee and Chair of Curriculum Committee
- Member of Center for Communicating Science Advisory Board
- Faculty Advisor of Science Policy Education & Advocacy Club (SPEAC)
- Senior Fellow, Honors Residential Commons
- Member of Mozaiko Living Learning Community Advisory Board
- ICAT advisory/consulting team member for Radio IQ Civil Discussion Series
- Conference Host Steering Committee Member, Science of Team Science and the Human Condition (12th Annual International Science of Team Science (SciTS) Conference)