

## CURRICULUM VITAE

September 2022

James L. Wescoat Jr.

Aga Khan Professor Emeritus of Landscape Architecture and Geography  
Former Co-Director, Norman B. Leventhal Center for Advanced Urbanism  
Massachusetts Institute of Technology  
77 Massachusetts Ave, Room 10-390  
Cambridge, MA 02139 USA  
217.714.6395 [wescoat@mit.edu](mailto:wescoat@mit.edu)  
<http://web.mit.edu/akpia/www/facultycurrent.htm#wescoat>

**Education:** *Ph.D. The University of Chicago* -- Geography (1983). Dissertation: "Integrated Water Development: Water Use and Conservation Practice in Western Colorado."

*M.A. The University of Chicago* -- Geography (1979). Thesis: "Naturalistic Plantings in the Cultural Landscape."

*B.L.A. Louisiana State University* – Landscape Architecture (1976). "The Ambiguities of Nature."

**Current Position:** *Aga Khan Professor Emeritus of Landscape Architecture and Geography, Aga Khan Program for Islamic Architecture, MIT.* 2020-present. Aga Khan Professor, Department of Architecture, 2008-2020; and Co-Director, Norman B. Leventhal Center for Advanced Urbanism (2017-20). Member of the MIT Architecture and Urbanism group, History, Theory & Criticism group, and Urban Risk Lab. Affiliate faculty member: Department of Urban Studies and Planning research groups: City Design and Development; and Environmental Planning and Policy. Member: Technology and Public Policy Program.

**Previous Positions:** *Professor and Head, Department of Landscape Architecture, College of Fine and Applied Arts, University of Illinois at Urbana-Champaign.* 2002-2008. Faculty affiliate: Department of Geography; Program in South Asian and Middle Eastern Studies; Center on Water as a Complex Environmental System; Institute for the Study of Intensively Managed Landscapes; International Council.

*Professor, Department of Geography, University of Colorado at Boulder.* 2000-02. Associate Chair and Director of Graduate Studies, 1999-2002. Associate Professor, 1993-2000; Assistant Professor, 1989-93. Advisory Board, Natural Hazards Research Application and Information Center, 1992-2002. Faculty Associate, Peace and Conflict Studies program, 2000-02. Member, Institute of Behavioral Science, Environment and Behavior Program, 1993-2002. Faculty Associate, College of Architecture and Planning, 2000-02.

*Assistant Professor, Department of Geography, the University of Chicago.*

1984-89. Instructor, 1983-84. Member of the Committee on Southern Asian Studies; Center for Middle Eastern Studies; Committee on Public Policy.

**Awards/  
Honors/  
Boards:**

International Advisory Committee, Aga Khan University, Faculty of Arts and Sciences, 2022-

Distinguished Service Award, Asian Geography Specialty Group, Association of American Geographers, 2021.

Research Advisory Board, Indian Institute for Science, Education and Research (IISER), Pune Water Centre, 2021-

Council of Fellows, American Society of Landscape Architects (Contributions to Knowledge), October 2018-

Distinguished Member Award, American Society of Landscape Architects, Water Conservation Professional Practice Network, June 2018.

Institute of Town Planners, India, 2017. Keynote on the Future of Cities, New Delhi. "Universal Access to Safe Drinking Water in India."

Beijing Forum keynote speaker in session on Socio-Ecological Infrastructure for New Cities, 2014.

MIT Center for Advanced Urbanism, team member on "Rebuild by Design" winning entry for the New Jersey Meadowlands, U.S. Department of Housing and Urban Development and Rockefeller Foundation, 2014.

Professor M. Athar Ali Memorial Lecture, Aligarh Muslim University, India, January 2014.

Warren Center for the Humanities Sacred Ecology Seminar and the Department of History of Art's Norman L. and Roselea J. Goldberg Lecture Series, Vanderbilt University, 2012.

Annemarie Schimmel Memorial Lecture, Metropolitan Museum of Art, 2011.

Lahore University of Management Sciences, Syed Babar Ali School of Science and Engineering Advisory Board, 2009-present. Chair 2019-22.

National Academy of Environmental Design, Co-chair of Research Committee, 2009-2013.

National Research Council, Water Science and Technology Board,

Washington, DC; Board Member, two terms. 2003-09.

National Research Council, National Associate, lifetime membership. 2008-present.

University of Chicago, Committee on Southern Asian Studies, University of Chicago, Associate member, 2007.

Distinguished Faculty Award for International Achievement, University of Illinois at Urbana-Champaign, 2007.

Inaugural Sir Bernard Feilden Lecture, Indian National Trust for Art and Cultural Heritage, INTACH-UK Trust, New Delhi, 7 February 2006. Fellow,

Institute of Urban Design, New York, 2004-06.

Phi Beta Kappa Visiting Scholars Program, 2003-04. Updike Memorial Fellow on arts and intercultural relations. Eight campus visits.

Advisor on the conservation of waterworks and gardens of the Taj Mahal, for the Archaeological Survey of India and Taj Mahal Conservation Collaborative, 2001-present.

CIC Academic Leadership Program Fellow, 2003-04. Workshops on human resources, long-range planning, budgeting and leadership at CIC universities.

American Society of Landscape Architects (ASLA), Research Merit Award for *the Moonlight Garden Project* – Elizabeth Moynihan, P.I., 2002.

Organization of Islamic Capitals and Cities (OICC). Second prize for *Mughal Gardens in Lahore: History and Documentation* by M. Naeem Mir, M. Hussain, and James L. Wescoat Jr. Cairo, Egypt. February 2001.

American Society of Landscape Architects, Research Merit Award for "The Mughal Gardens Project," 1998.

Government of Pakistan, First prize National Book Award in 1998, for Mahmood Hussain, Abdul Rehman and James L. Wescoat Jr., *The Mughal Garden: Interpretations, Conservation, Implications*. Lahore: Ferozsons Ltd., 1996.

American Academy in Rome. Rome Prize Fellowship in Landscape Architecture, 1996-1997 to study *The Uses of Water in Metropolitan Landscape Design*.

Dumbarton Oaks, Washington, DC. Board of Senior Fellows, Studies in Gardens and Landscape Architecture, 1995-2001.

Allama Iqbal Award (first prize). Government of Punjab, for books published on Punjab. Abdul Rehman and James L. Wescoat Jr., *Pivot of the Punjab: The Historical Geography of Medieval Gujrat*. Lahore: Dost Publications, 1993.

Allama Muhammad Iqbal Award (first prize). Government of Punjab, for books published on Punjab. Sajjad Kausar, Michael Brand, and James L. Wescoat Jr. *Shalamar Garden*. Karachi: Pakistan Department of Archaeology, 1991.

Rockefeller Residency Fellowship in the Humanities, Center for Asian Art, Smithsonian Institution. Research project: "In Gardens Watered by Running Streams: The Meanings of Water in Mughal Gardens at Agra," 1986 and 1987.

Dumbarton Oaks Fellowship in the History of Landscape Architecture. Research project: "From Bagh-i-Gul Afshan to the Gardens of the Taj: The Evolution of a River Garden Landscape in Mughal India," summer 1985.

National Science Foundation Graduate Fellowship, 1979-82. University of Chicago Graduate Fellowship, 1978-9.

American Society of Landscape Architects, Award for Academic Achievement, 1976.

**Publications.** Organized under two headings — 1) *Water Resources Research*; and 2) *Cultural Landscape Research*. Single-authored except as noted.

### **1. Water Resources Research**

#### *Books and Monographs:*

Committee chair. National Research Council. Water Science and Technology Board. *Delta Waters: Research to Support Integrated Water and Environmental Management in the Lower Mississippi River*. Washington, DC: National Academy Press, September 2013.

Yu, W., Y.C. Yang, A. Savitsky, D. Alford, C. Brown, J. Wescoat, D. Debowicz, S. Robinson. *The Indus Basin of Pakistan: The Impacts of Climate Risks on Water and Agriculture*. Directions in Development series. Washington DC: World Bank Publications, 2013.

Committee chair. National Research Council, Water Science and Technology Board. *Review of Lake Ontario-St. Lawrence River Studies*. Washington, DC: National Academy Press, 2006. (Committee chair).

James L. Wescoat, Jr. and Gilbert F. White, *Water for Life: Water Management and Environmental Policy*. Cambridge: Cambridge University Press, 2003.

Committee chair. National Research Council, Water Science and Technology Board. *Downstream: Adaptive Management of Glen Canyon Dam and the Colorado River Ecosystem*. Washington, DC: National Academy Press, November 1999.

*Integrated Water Development: Water Use and Conservation Practice in Western Colorado*. Research Paper no. 210. Chicago: University of Chicago, Department of Geography, 1984.

*Journal Articles and Book Chapters:*

Wescoat, James L. Jr. and Aditi Mukherji, “Scenario based water resources forecasting and planning,” contribution to chapter 1 of *Coevolution and Prediction of Coupled Human-Water Systems: A Synthesis of Change in Hydrology*. IAHS Panta Rhei Synthesis volume, in preparation.

Muhammad, Abubakr and James L. Wescoat Jr., “Developing Knowledge Capacity for Water Resource Management and Service Delivery: New Conceptual Models and Tools.” In *Water Policy in Pakistan: Issues and Options*. Ed. Mahmood Ahmad et al. Springer, accepted in revision.

Yarina, Elizabeth; and James L. Wescoat Jr. “Typologies of Environmental Relocation: A framework for understanding risk-based relocation through space, time and power,” *Global Environmental Change*, under review in revision.

Wescoat, James L. Jr; Murty. Jonnalagadda V.R., Singh, Ranu; Verma, Piyush. 2022. A “Sustainability Planning Framework and Methods for Rural Drinking Water in Satara District, Maharashtra, India.” *Frontiers in Water*. 2022.  
<https://doi.org/10.3389/frwa.2022.804845>.

“Drinking Water for All: Rurban Water Planning in India,” in *Future of Cities: Planning, Infrastructure, and Development*. Eds. Ashok Kumar, D.S. Meshram. New Delhi: Routledge, 2022, 112-127.

Orr, A., Ahmad, B., Alam, U., Appadurai, A., Bharucha, Z. P., Biemans, H., et al. 2022. Knowledge priorities on climate change and water in the Upper Indus Basin: A horizon scanning exercise to identify the top 100 research questions in social and natural sciences. *Earth's Future*, 10, e2021EF002619. <https://doi-org.libproxy.mit.edu/10.1029/2021EF002619>

Birge David; Sarah Fletcher; Afreen Siddiqi; Ameena Al Sumaiti; James L. Wescoat. “Multi-Criteria, Multi-Resolution Modeling of Suburban Residential Landscape Alternatives: Water-Efficient Villas in the Arid Middle East.” *ASCE Journal of Urban Planning and Development*, Volume 148 Issue 2 - June 2022. DOI: 10.1061/(ASCE)UP.1943-5444.0000803.

Usmani, Sabah; Afreen Siddiqi; and James L. Wescoat Jr. "Energy Generation in the Canal Irrigation Network in India: Integrated Spatial Planning Framework on the Upper Ganga Canal Corridor," *Renewable and Sustainable Energy Reviews*, Volume 152, December 2021, 111692. <https://doi.org/10.1016/j.rser.2021.111692>.

Wescoat, James L. Jr. and J.V.R. Murty, "District Drinking Water Planning for Sustainability in Maharashtra: Between Local and Global Scales," *Sustainability*, special issue on Local- to Global-Scale Environmental Issues, 13, 2021, online at: <https://doi.org/10.3390/su13158288>.

Wescoat, James L. Jr., Rahul Bramhankar, JVR Murty, Ranu Singh, and Piyush Verma, "A Macrohistorical Geography of Rural Drinking Water Institutions in India," *Water History*, 2021, <https://doi.org/10.1007/s12685-021-00274-8>.

Wescoat, James L. Jr.; Muhammad, Abubakr; and Siddiqi, Afreen. 2021. "Pakistan's Water Resources: From Retrospect to Prospect." In *Pakistan's Water Outlook: Issues and Impacts*. Ed. Arif Watto. Dordrecht: Springer, 2021, pp. 13-36.

Wescoat, James L Jr.; Waqas Ahmed; Steven Burian; Jehangir F Punthakey; and Ayesha Shahid, 2021, "Examining the Irrigated Agriculture Sector in Pakistan with a Water-Energy-Food Nexus Approach." In *Pakistan's Water Outlook: Issues and Impacts*. Ed. Arif Watto. Dordrecht: Springer, 2021, pp. 155-183.

Banhidaraha, Abdullah Khamis; Al-Sumaiti Aameena Saad; Wescoat Jr. James L.; Hoach The Nguyen. 2020. "Electricity-water usage for sustainable development: An analysis of United Arab Emirates farms," *Energy Policy*. Volume 147, December 2020, 111823.

Al-Sumaiti, Aameena Saad, Abdullah Khamis Banhidarah, James L. Wescoat Jr., Abdullahi Kehinde Bamigbade, and Hoach The Nguyen. 2020. "Data Collection Surveys as the Cornerstones of the Water-Energy Nexus: A Systematic Overview," *IEEE Access*, vol. 8, pp. 93011-93027, doi: 10.1109/ACCESS.2020.2995054.

Halvorson, Sarah J. and Wescoat, James L. Jr, 2020. "Guarding the Sons of Empire: Military-State-Society Relations in Water, Sanitation & Health Programs of mid-19th Century India," *Water*, 12(2), 429; <https://doi.org/10.3390/w12020429>.

Singh, R.; Brahmkar, R.; Murty, J.V.R., Verma, P., and Wescoat, J.L. Jr. 2019. "Analyzing Rural Drinking Water Services for District Planning in Maharashtra, India," *Water Policy*, online at <https://doi.org/10.2166/wp.2019.086>.

Wada, Y. et al. 2019. "Co-designing Indus Water-Energy-Land Futures," *One Earth* (Cell Press) 1:2, 185-194.

Platt, R.H., Burton, I.; Mitchell, J.K.; Reuss, M.; Rubin, C.B.; Wescoat, J.L. Jr., Richman, B. and Cutter, S.L. August 2019. "Gilbert F. White: Scholar, Mentor, Advocate," *Environment*, pp. 4-21.

Wescoat, J.L. Jr., Shah, Riddhi; Singh, Ranu; and Murty, J.V.R. 2019. "Habitations, Villages and Gram Panchayats: Local Drinking Water Planning in Rural India," *Journal of Water, Sanitation and Hygiene for Development*, 9,3: 522-530.

Committee. 2019. *Framing the Challenge of Urban Flooding in the United States*. Responsible for section on blue-green infrastructure. Washington, DC, National Research Council.

Shahid, A., Siddiqi, A. and Wescoat, J.L. Jr. 2019. "Reimagining the Planning of Irrigation and Agriculture in Punjab, Pakistan." In *Indus River Basin: Water Security and Sustainability*. Ed. Sadiq Khan and Thomas Adams. New York: Academic Press, 389-415.

Siddiqi, A., Wescoat, J. and Muhammad, A. 2018. "Socio-hydrological assessment of water security in canal irrigation systems: A conjoint quantitative analysis of equity and reliability," *Water Security*, 4-5: 44-55.

Hui, Rebecca and Wescoat, J.L. Jr.\* 2018, "Visualizing Peri-Urban and Rurban Water Conditions in Pune District, Maharashtra, India," *Geoforum*, 102, 255-266.  
<https://doi.org/10.1016/j.geoforum.2018.01.008>

Wescoat, J.L. Jr., Muhammad, Abubakr, and Siddiqi, Afreen. 2018. "Socio-Hydrology of Channel Flows in Complex River Basins: Rivers, Canals, and Distributaries in Punjab, Pakistan," *Water Resources Research*, 54,1, 464-479.

Noiva, K., Fernandez, J., and Wescoat, J.L. Jr. 2016, "Cluster Analysis of Urban Water Supply and Demand: Toward Large-Scale Comparative Sustainability Planning," *Sustainable Cities and Society* 27, 484-496. [doi:10.1016/j.scs.2016.06.003](https://doi.org/10.1016/j.scs.2016.06.003)

"Water resources and hydrological management," *International Encyclopedia of Geography*, 2016, 10k words.

"Hydrology: History," *International Encyclopedia of Geography*, 2016, 5k words.

Wescoat, J.L. Jr., Fletcher, S., and Novellino, M., "National rural drinking water monitoring: progress and challenges with India's IMIS database," *Water Policy*, 2016, 18.4 1015–1032. <http://wp.iwaponline.com/content/ppiawaterpol/early/2016/02/01/>

"Peri-urban water planning and risk reduction: A waterscape approach," in *Design to Sustain – Towards effective Water Management through Habitat Development*. Mumbai: Aga Khan Planning and Building Services, India, 2015, pp. 138-153.

"Risks, hazards, and vulnerability," in *Routledge Handbook of Political Ecology*. Eds. T. Perreault, G. Bridge, and J. McCarthy, Routledge, 2015, pp. 293-302.

Scott, C.; Kurrian, M.; and Wescoat, J.L. Jr. "The water-energy-food nexus: enhancing adaptive capacity to complex global challenges," in *Governing the Nexus-Water, Soil and*

*Waste Resources Considering Global Change*. Ed. M. Kurrian. Dordrecht: Springer, 2014, pp. 15-38.

Yang, Y. C. E., Brown, C. M., Yu, W. H., Wescoat, J. L. Jr. and Ringler C., 2014. "Water Governance and Adaptation to Climate Change in the Indus River Basin." *Journal of Hydrology*, 519, 2527-2537.

"Water Resources." *International Encyclopedia of the Social and Behavioral Sciences*. London: Elsevier, 2014 update of 2001 edition, pp. 16382-16387.

"Gilbert F. White, Environmental Geographer," *International Encyclopedia of the Social and Behavioral Sciences*. Revised edition. London: Elsevier, 25 (2014): 558-563.

"Searching for comparative international water research: urban and rural water conservation research in India and the United States," *Water Alternatives*. 2014. 7(1): 199-219 <http://www.water-alternatives.org/index.php/alldoc/articles/vol7/v7issue1/241-a7-1-12/file>.

Sivapalam, M. et al., "Socio-hydrology: Use-Inspired Water Sustainability Science." *Earth's Future* (American Geophysical Union). 2014. 2,4: 225-230. <http://onlinelibrary.wiley.com/doi/10.1002/2013EF000164/pdf>

"Water-Conserving Design: Contributions of Water Budget Analysis in Arid and Semi-Arid Regions," in *Out of Water: Design Solutions for Urban Regions*. Eds. A. Chouni and L. Margolis. Birkhauser Press, 2014, pp. 163-173.

"Reconstructing the Duty of Water: A Study of Emergent Norms in Socio-Hydrology," *Hydrology and Earth Systems Science*, 2013. 17, 4759–4768. Special issue on Prediction in the Anthropocene. European Geosciences Union. <http://www.hydrol-earth-syst-sci.net/17/4759/2013/hess-17-4759-2013.pdf>.

Siddiqi, A. and Wescoat, J.L. Jr. "Energy use in large-scale irrigated agriculture in the Punjab province of Pakistan." *Water International*, Special Issue: Water for food security: challenges for Pakistan. 38, 5, published online September 2013, pp. 571-86.

"Water, Climate, and the Limits of Human Wisdom: Historical-Geographic Analogies between Early Mughal and Modern South Asia," *Professional Geographer*, August 2013, 66,3: 382-389.

"Water Resources: Streams of Inquiry, a Review Essay," *Annals of the Association of American Geographers* 103:2, 2013: 408-415.

James L. Wescoat Jr. and Shun Kanda, "Rapid Visual Site Analysis for Post-Disaster Landscape Planning: Expanding the Range of Choice in a Tsunami-Affected Town in Japan, *Landscape Review*. 2013. 14/2: 5-22.



NRC Committee on *Himalayan Glaciers: Climate Change, Water Resources, and Water Security* (2012). Contributions to chapters on water management and natural hazards.

Siddiqi, Afreen; James L. Wescoat, Salal Humair and Khurram Afridi. An empirical analysis of the hydropower portfolio in Pakistan. *Energy Policy*, 2012, vol. 50, issue C, pages 228-241.

James L. Wescoat Jr. and Sarah Halvorson, "Emerging Regional Perspectives on Water Research and Management: An Introductory Comment," *Eurasian Geography and Economics*, 2012, 53, No. 1, pp. 1-8.

"The Colors of Water: Hydrology and Human Experience at the Taj Mahal." In *New Geographies: Urbanisms of Color*, edited by Gareth Doherty, Harvard Graduate School of Design, 2011, 174-183.

"Disaster-Resilient Design," *Art, Design & Architecture*, Karachi, March 2011.

"Submerged Landscapes: The Public Trust in Urban Environmental Design, from Chicago to Karachi and Back Again." *Vermont Journal of Environmental Law*, July 2009, 435-75.

"Water Shortages and Water-Conserving Urban Design in Pakistan," *Pakistan's Water Crisis*. Ed. M. Kugelman. Washington, DC: Woodrow Wilson Center, 2009, 129-152.

"Comparative International Water Research," Universities Council on Water Resources, *Journal of Contemporary Water Research & Education*, 2009, Issue 142, 1-6.

James L. Wescoat, Jr., Lisa Headington, and Rebecca Theobald, "Water and Poverty in the United States," *Geoforum* 38(2007): 801-14.\* Electronic update: "Water and Poverty in the United States: An Update," *Encyclopedia of the Earth*, 2008.

"Gilbert F. White (1911-2006): Wisdom in Environmental Geography," *The Geographical Review* 96:4 (2006): 700-710.

"Water Policy and Cultural Exchange: Transferring Lessons from around the World to the Western United States," *In Search of Sustainable Water Management: International Lessons for the American West and Beyond*, ed. D. Kenney, Natural Resources Law Center. Cheltenham: Edward Elgar Publishing, 2005, pp. 1-24.

"Water Resources," *Geography in America at the Dawn of the 21st century*. Eds. Gary Gaile and Cort Wilmott. Oxford: Oxford University Press, 2004, pp. 283-301.

J.W. Jacobs and J.L. Wescoat Jr., "Managing River Resources: Lessons from Glen Canyon Dam," *Environment* (March 2002): 8-19.

S.J. Halvorson, and J.L. Wescoat, Jr, "Problem-Based Inquiry on World Water Problems

in Large Undergraduate Classes,” *Journal of Geography*, 101(3), (2002): 91-102.

James L. Wescoat Jr., Sarah Halvorson, Lisa Headington, and Jill Replogle, “Water, Poverty, Equity and Justice in Colorado: A Pragmatic Approach,” in *Justice and Natural Resources*. Eds. Kathryn Mutz and Gary Bryner. Washington, DC: Island Press, 2001, pp. 57-86.

"Water Rights in South Asia and the United States: Comparative Perspectives, 1873-1996." In *Land, Property and the Environment*. Ed. John F. Richards. Oakland: ICS, 2001, pp. 298-337.

"'Watersheds' in Regional Planning." In *The American Planning Tradition: Culture and Policy*. Ed. Robert Fishman. Washington, DC: Wilson Center, Smithsonian Institution, 2000, pp. 147-72.

James L. Wescoat Jr., Sarah Halvorson, and Daanish Mustafa, “Water Management in the Indus Basin of Pakistan: A Half-Century Perspective,” *International Journal of Water Resources Development* 16 (2000): 391-406.

"The Historical Geography of Indus Basin Management: A Long-Term Perspective, 1500-2000." In *The Indus River: Biodiversity, Resources, Humankind*. Linnean Society. Eds Azra and Peter Meadows. Karachi: Oxford University Press, 1999, pp. 416-28.

Meyer, W.B. et al., "Reasoning by Analogy," chapter 4 of *Human Choice and Climate Change: Tools for Policy Analysis*. Ed. S. Rayner and E. Malone. Columbus: Battelle Press, 1998, pp. 217-90.

Mustafa, Daanish; and J.L. Wescoat Jr. "Development of Flood Hazards Policy in the Indus River basin of Pakistan, 1947-1995." *Water International*. 22:4 (1997): 238-44.

"The Cultures of Irrigation." Chapter 2 of *A New Era for Irrigation*. Committee on the Future of Irrigation in the Face of Competing Demands, Water Science and Technology Board, Washington, DC: National Research Council, 1996. J.L. Wescoat Jr. and Laurence MacDonnell principal authors.

"Main Currents in Multilateral Water Agreements: A Historical-Geographic Perspective, 1648-1948," *Colorado Journal of International Environmental Law and Policy* 7 (1995): 39-74.

W.E. Riebsame, et al. "Complex River Basins". In K. Strzepek and J. Smith, *As Climate Changes: International Impacts and Implications*. Cambridge: Cambridge University Press, 1995, pp. 57-91.

J.W. Jacobs and James L. Wescoat Jr., "Flood Hazard Problems and Programmes in Asia's Large River Basins," *Asian Journal of Environmental Management* 2 (1994): 91-104.

R. Leichenko and J.L. Wescoat Jr. "Environmental Impacts of Climate Change and Water Development in the Indus Delta Region," *Water Resources Development* 9 (1993): 247-61.

"Water Law, Urbanization, and Urbanism in the American West: The 'Place of Use' Reconsidered," *Urban Geography* 14 (1993): 414-20.

"Resource Management: UNCED, GATT, and Global Change," *Progress in Human Geography* 17 (1993): 232-40.

"Common Themes in the Work of Gilbert White and John Dewey: A Pragmatic Appraisal." *Annals of the Association of American Geographers* 82 (1992): 587-607.

"Visits to the U.S. Bureau of Reclamation from South Asia and the Middle East, 1946-1990: An Indicator of Changing International Programs and Politics." *Irrigation and Drainage Systems*, with Roger Smith and David Schaad 6 (1992): 55-67.

Beyond the River Basin: The Changing Geography of International Water Problems and International Watercourse Law," *Colorado Journal of International Environmental Law and Policy* 3 (1992): 301-30.

"Resource Management: Oil Resources and the Persian Gulf Conflict." *Progress in Human Geography* 16 (1992): 243-56.

"Managing the Indus River Basin in Light of Global Climate Change: Four Conceptual Approaches." *Global Environmental Change: Human and Policy Dimensions* (December 1991): 381-95.

"Resource Management: The Long-term Global Trend," *Progress in Human Geography* 15: (1991): 81-93.

"Common Law, Common Property, and Common Enemy: Notes on the Political Geography of Water Resource Management for the Sundarbans Area of Bangladesh." *Agriculture and Human Values* 7(1990): 73-87.

"The 'Practical Range of Choice' in Water Resources Geography," *Progress in Human Geography* (1987): 41-59.

"Impacts of Federal Salinity Control on Water Rights Allocation Patterns in the Colorado River Basin," *Annals of the Association of American Geographers* 76 (1986): 157-74.

"Expanding the Range of Choice in Water Management: An Evaluation of Policy Approaches," *United Nations Natural Resources Forum* 10(1986): 239-54.

"On Water Conservation and Reform of the Prior Appropriation Doctrine in Colorado,"

*Economic Geography* 61 (1985): 3-24.

"Evaluation of Long-Term Change in Water Management Systems.," *Transactions of the International Commission on Irrigation and Drainage*. New Delhi, 1984.

"Water Rights Transfer and Irrigation Efficiency," In *Advances in Irrigation and Drainage: Surviving External Pressures*. Ed. John Borelli, et al. New York: American Society of Civil Engineers, 1984.

## **2. Cultural Landscape Research -- Indo-Islamicate waterworks, gardens, cities, and regions.**

### *Books:*

James L. Wescoat Jr. and Douglas M. Johnston, eds. *Places of Power: Political Economies of Landscape Change*. Dordrecht: Springer Publishing, 2007.

James L. Wescoat Jr. and Joachim Wolschke-Bulmahn, eds. *Mughal Gardens: Sources, Places, Representations, Prospects*. Washington: Dumbarton Oaks, 1996. [Including "Introduction;" chapter on "Gardens, Urbanization, and Urbanism in Mughal Lahore, 1531-1657," pp. 139-69; and "Afterword"].

M. Hussain, A. Rehman, and J.L. Wescoat Jr., eds. *The Mughal Garden: Interpretation, Conservation, and Implications*. Lahore: Ferozsons, 1996.

M. Naeem Mir, M. Hussain, and James L. Wescoat Jr. *Mughal Gardens in Lahore: History and Documentation*. Lahore: Department of Architecture, Lahore University of Engineering and Technology, 1996.

Abdul Rehman and James L. Wescoat Jr. *Pivot of the Punjab: The Historical Geography of Medieval Gujrat*. Lahore: Dost Publishers, 1993. 208 pp.

Sajjad Kausar, Michael Brand, and James L. Wescoat Jr. *Shalamar Garden: Landscape, Form, and Meaning*. Karachi: Pakistan Department of Archaeology and Museums, 1990.

### *Journal Articles and Book Chapters (single-authored except as noted):*

"Hasht Bihisht: A Spatial Interpretation of the Location, Size, and Layout of Humayun's Tomb-Garden in the Nizamuddin Area of Mughal Delhi," *Muqarnas* 40, in revision, forthcoming, 2023.

"Water and Work in Mughal Gardens and Landscapes," *Journal of Material Cultures in the Muslim World*, special issue on water, in press, 2022.

"Mughal Riverfront Urbanism, Past and Present: A Comparative Study of Agra, Lahore, and Delhi," in *Riverine Landscapes: Urbanity and Conflict*, ed. Manu Sobti, Routledge,

under review.

“Descent of the Ganga and ascent of humankind: Four spatial orientations toward sacred river heritage,” In Singh, Rana P.B. (India) and Niglio, Olimpia (Japan), editors (2022), *Sacred Heritage and Pilgrimages in Cities*. Dordrecht: Springer Nature, forthcoming.

“Water Heritage and Mughal Gardens in Kashmir: An Historical Geography,” in *Mughal Gardens of Kashmir*, Srinagar: INTACH-J&K, accepted and forthcoming, 2022.

“Islamic Gardens, Environmental Ethics and Value Pluralism,” *A Sustainable Future: Urban Parks and Gardens*. Ed. Philip Jodidio. Munich: Prestel, 2022, pp. 44-65.

Wescoat James L. Jr and Rio Fischer, “Hinterland of a Hinterland: The Changing Capital Cities of Sultanate and Mughal Bengal,” *International Journal of Islamic Architecture*, issue 11:2 (2022): pp. 241-266.

“The Paradise Gardens of Lahore: Islamic Ideals and Historical Realities,” in *Sustainable Societies: Interreligious & Interdisciplinary Responses*, eds. R. Sherma, P. Bilimoria, and P. Rodriguez. Dordrecht: Springer, 2022, pp. 273-288.

Wescoat, James L. and Abubakr Muhammad, “Irrigated Gardens of the Indus River Basin: Toward a Cultural Model for Water Resource Management,” *HydroHumanities: Water Discourse and Environmental Futures*. Eds. Kim De Wolff, Rina C. Faletti, Ignacio López-Calvo. Berkeley: University of California Press, December 2021, pp. 190-214.

Wescoat James L. Jr. and Smita Rawoot, “Blue-green urban infrastructure in Boston and Bombay (Mumbai): a macro-historical geographic comparison,” *ZARCH: Journal of Interdisciplinary Studies in Architecture and Urbanism* 15 (2021): 36-50.

“Water Law in Muslim Countries Revisited: A Study of the *Qur'an*,” in *Religion, Sustainability, and Place: Exploring Moral Geographies for the Anthropocene*. Eds. Edward Davis and Steven Silvern, February 2021, London: Palgrave Macmillan, 71-96.

“Conservation of Indo-Islamic Water Experience,” in *Heritage Conservation in Postcolonial India, Approaches and Challenges*, edited by Manish Chalana and Ashima Krishna. New Delhi, Routledge, 2021, ch. 15, pp. 235-51.

“The Aesthetics of Planting in Early Mughal Garden Painting – Part IV, Meaning” *LA! 65 Journal of Landscape Architecture* (India), Feb 2021, 11-21.

“The Aesthetics of Planting in Early Mughal Garden Painting – Part III, Poetic Manuscripts” *LA! 64 Journal of Landscape Architecture* (India), Dec 2020, 15-25.

“The Aesthetics of Planting in Early Mughal Garden Painting – Part II, Historical Manuscripts” *LA! 63 Journal of Landscape Architecture* (India), Fall 2020, 14-25.

“The Aesthetics of Plantings in Early Mughal Garden Paintings: Part I, The *Tutinama* [Tales of a Parrot] and *Hamzanama* [Adventures of Hamza],” *LA! Journal of Landscape Architecture* (India), 62 (2020): 20-27.

“Nallah to Nadi, Stream to Sewer to Stream: Waterscape Planning in India and the United States,” in *Water Histories: The Materiality of Liquescence*. Eds. Sugata Ray and Venugopal Maddipati. London: Routledge, 2019, pp. 135-158.

“‘In the Center of the Map...’ Reflecting on Marshall Hodgson’s Ideas about Persianate Conscience and History in Early Mughal Architecture,” ed. Mehreen Chida-Razvi, special issue of *South Asian Studies* 35:1, 2019, 7-24.

“Human Use of Landforms on the Deccan Volcanic Plateau: Formation of a Geo-Cultural Region,” *Geomorphology*, 2018, 175-190. <https://doi.org/10.1016/j.geomorph.2018.08.044>

“Water-Conserving Design in Rurban India,” *LA! Journal of Landscape Architecture, India*. Special issue on Traditional Wisdom, December 2016, pp. 54-59.

“Between garden and geography: Landscape as an emergent construct in the wider Middle East,” in *Contemporary Urban Landscape Design in the Middle East*, ed. Muhammad Gharipour, Routledge, 2016, pp. 22-44.

“Barapula Nallah & Its Tributaries: Watershed Architecture in Sultanate and Mughal Delhi,” *Marg* special issue on *Water Design: Environment and Histories*, 2016, pp. 84-95.

“Mughal Gardens: History, geography, and culture,” in *Heritage of the Mughal World*, ed. Philip Jodidio. Munich: Prestel, 2015, 96-111.

“Comparing ancient water infrastructure for new cities,” *LA Frontiers* (China), Fall 2014. Expanded version published as, “Relevance of ancient water infrastructure for new cities: A socio-hydrology approach,” *Selected Papers of the 2014 Beijing Forum*, 2015, 2,5: 56-68.

“Conserving urban water heritage in multi-centered regions: an historical-geographic approach to early modern Delhi, *Change over Time: An International Journal of Conservation and the Built Environment*, 4(2014): 142-166.

“The ‘Duties of water’ with respect to planting: Toward an ethics of irrigated landscapes,” *Journal of Landscape Architecture*, ECLAS. Special issue on Water, 2014. DOI 10.1080/18626033.2013.864070, pp. 6-13.

“Water-Conserving Design in the Landscapes of Abraham,” in *Landscape Architecture in Environmental Planning*. Eds. H. Fischer, S. Ozar, and J. Wolschke-Bulmahn. University of Hannover and Van Leer Institute, 2014, pp. 237-255.

“Water and Waterworks in Garden Archaeology,” in *Sourcebook for Garden Archaeology Methods, Techniques, Interpretations and Field Examples*. Ed. A. Malek. Bern: Peter Lang, 2013, pp. 421-51.

“The Indus River Basin as Garden,” *Die Gartenkunst*, 24,1 (2012): 33-41.

“Gardens, Tents, and Pavilions,” in *Aga Khan Museum Catalogue*, 2011, pp. 73-93.

“The Changing Cultural Space of Mughal Gardens,” in *Companion to Asian Art and Architecture*. Eds. Rebecca Brown and Deborah Hutton. London: Blackwell, 2011, pp. 201-229.

“Searching for Wisdom in Mughal-Rajput Waterworks: East-West Interdependencies,” in *Bau- und Gartenkultur zwischen "Orient" und "Okzident": Fragen zu Herkunft, Identität und Legitimation*. Eds. Joachim Ganzert and Joachim Wolschke-Bulmahn, Hannover: University of Hanover, 2009, pp. 187-213.

“Questions about the Political Significance of Mughal Garden Waterworks,” in *Middle Eastern Garden Traditions: Unity and Diversity*, edited by Michel Conan. Washington: Dumbarton Oaks and Harvard University Press, 2007, pp. 177-95.

“The Indo-Islamic Garden: Heritage Conflict, Conservation and Conciliation in Gujarat, India,” in *Cultural Heritage and Human Rights*, edited by D.F. Ruggles and H. Silverman. Dordrecht: Springer Publishing, 2007, pp. 53-77.

“Conserving Mughal Garden Waterworks,” Sir Bernard Feilden Lecture publication. New Delhi: Indian National Trust for Art and Cultural Heritage, 2007.

Amita Sinha, G.B. Kesler, D.F. Ruggles, and J.L. Wescoat Jr., “Champaner-Pavagadh, Gujarat, India: Challenges and Responses in Cultural Heritage Planning and Design.” *Tourism Recreation Research*, vol. 29, no. 3 (2004): 75-78.

“Beneath Which Rivers Flow: Water, Geographic Imagination, and Sustainable Landscape Design,” in *Landscapes of Water: History, Innovation and Sustainable Design*, 2 vols. Ed. U. Fratino, A. Petrillo, A. Petruccioli, and M. Stella. Bari: Uniongrafica Corcelli Editrice, 2002, pp. 13-34.

“The Landscapes of Roman Water Law,” *Environmental Design*. Special issue on Multi-Cultural Mediterranean Landscapes (2002): 88-99.

James L. Wescoat Jr., Richa Nagar and David Faust. "Social and Cultural Geography", in *The Oxford India Companion to Sociology and Social Anthropology*. 2 vols. Ed. Veena Das. New Delhi: Oxford University Press, 2002, pp. 326-65.

“Toward an Aesthetic of Water in Indo-Islamic Gardens: The Case of Nagaur Fort,

Rajasthan,” [Estetica dell’acqua nei giardino di Nagaur nel Rajasthan (India)]. *Giardini Islamici: Architettura, Ecologia*. Genoa: Microarts Edizioni, 2001, pp. 109-20.

“Waterworks and Landscape Design at the Mahtab Bagh,” in *The Moonlight Garden: New Discoveries at the Taj Mahal*, pp. 59-78. Ed. Elizabeth B. Moynihan. Washington, DC: Smithsonian Institution and University of Washington Press, 2000.

“Wittfogel East and West: Changing Perspectives on Water Development in South Asia and the US, 1670-2000.” In *Cultural Encounters with the Environment: Enduring and Evolving Geographic Themes*. Eds. A.B. Murphy and D.L. Johnson. Rowman & Littlefield, 2000, pp. 109-32.

"Toward a Modern Map of Roman Water Law," *Urban Geography* 18 (1997):100-5.

"Mughal Gardens: The Re-emergence of Comparative Possibilities and the Wavering of Practical Concerns," *Perspectives on Garden Histories*. Ed. M. Conan. Washington, DC: Dumbarton Oaks, 1999, pp. 107-26. <http://www.doaks.org/Perspectives/perspec06.pdf>

“A Geographic Perspective on Sustainable Landscape Design in Arid Environments,” Also: “Summary of Discussion and Future Concerns,” *Sustainable Landscape Design in Arid Climates*. Geneva: The Aga Khan Trust for Culture, 1999, pp. 11-23 and 97-102.

"Mughal Gardens and Geographic Sciences, Then and Now," in *Gardens in the Time of the Great Muslim Empires: Theory and Design*, special issue of *Muqarnas*, ed. A. Petruccioli. Leiden: E.J. Brill, 1997, pp. 187-202. [available on ArchNet].

"Muslim Contributions to Geography and Environmental Ethics," *Philosophy and Geography* 1 (1996): 91-116.

"Historic Mughal Gardens: Garden Conservation in Urbanizing Regions," in *Architectural and Urban Conservation*, pp. 187-93. Ed. Santosh Ghosh. Calcutta: Centre for Built Environment, 1996.

"From the Gardens of the *Qur'an* to the Gardens of Lahore." *Landscape Research* 20 (1995): 19-29. [Reprinted in *Islam and Ecology*, eds. R. Foltz et al. Cambridge: Harvard University Press, 2003, pp. 511-26].

"Waterworks and Culture in Metropolitan Lahore," *Asian Art and Culture*. Spring/Summer 1995: 21-36.

"The 'Right of Thirst' for Animals in Islamic Water Law: A Comparative Approach," *Environment and Planning D: Society and Space* 13 (1995) 637-54. [Reprinted as a book chapter in *Animal Geographies*, eds. J. Wolch and J. Emel, published by Verso Press, 1998].



James L. Wescoat Jr. and Joachim Wolschke-Bulmahn, "The Mughal Gardens of Lahore: History, Geography and Conservation Issues," *Die Gartenkunst* 6 (1994): 19-33.

"The Scale(s) of Dynastic Representation: Monumental Tomb-Gardens in Mughal Lahore," *ECUMENE: Journal of Environment, Culture, and Meaning* 1 (1994) 324-48.

"L'acqua nei giardini islamici: religione, rappresentazione e realta" [Water in Islamic Gardens: Religion, Representation, and Reality]. In *Il Giardino Islamico: Architettura, natura, paesaggio*. Ed. A. Petruccioli. Milan: Electa, 1994, pp. 109-126. [Translated as, "Das Wasser in den islamischen Gärten. Religion, Repräsentation und Realität," in *Der islamische Garten. Architektur–Natur–Landschaft*. Stuttgart: DVA, 1995, pp. 109-26].

"Toward a Map of Mughal Lahore: A Survey of Cartographic Sources from 1590 to 1990." *Environmental Design: Journal of the Islamic Environmental Design Research Centre* (1993): 186-93. [Available on ArchNet].

"Ritual Movement and Territoriality: A Study of Landscape Transformation during the Reign of Humayun." *Environmental Design: Journal of the Islamic Environmental Design Research Centre* (1993): 56-63. [Available on ArchNet].

James L. Wescoat Jr., Michael Brand, and M.N. Mir, "The Shahdara Gardens of Lahore: Site Documentation and Spatial Analysis." *Pakistan Archaeology* 25 (1993): 333-66.

"Gardens vs. Citadels: The Territorial Context of Early Mughal Gardens, *Garden History: Issues, Approaches, Methods*, pp. 331-58. Ed. J.D. Hunt. Washington, D.C.: Dumbarton Oaks, 1992.

"Gardens of Conquest and Transformation: Lessons from the Earliest Mughal Gardens in India." *Landscape Journal* 10:2 (1991): 105-14.

James L. Wescoat Jr., Michael Brand and M. Naeem Mir, "Gardens, Roads, and Legendary Tunnels: The Underground Memory of Mughal Lahore," *Journal of Historical Geography* 17,1 (1991): 1-17.

"Gardens of Invention and Exile: The Precarious Context of Mughal Garden Design During the Reign of Humayun (1530-1556)," *Journal of Garden History* 10: 106-116, 1990.

"Challenging the Desert." In *The Making of the American Landscape*, pp. 186-203. Ed. Michael P. Conzen, Allen & Unwin, 1990. (Updated edition, 2009).

"Picturing an Early Mughal Garden," *Asian Art* 2 (1989): 59-79.

"The Islamic Garden: Issues for Landscape Research", *Environmental Design: Journal of the Islamic Environmental Design Research Centre*. Rome (1986): 10-19.

“Early Water Systems in Mughal India”, *Environmental Design: Journal of the Islamic Environmental Design Research Centre*, special issue on water in Islamic architecture and design, vol.2, 1985, pp. 50-57.

### **Technical Reports, Project Reports, Exhibits, Films & Abstracts:**

Bharucha, Z.A. et al., “Climate and Water in the Upper Indus Basin: An Urgent New Research Agenda, June 2022.

“Moving Together,” research station in the 2021 Architecture Venice Biennale. Exhibit on Environmental Migration and Voluntary Planned Relocation in Tajikistan, Puerto Rico, and Louisiana. Sheila Kennedy, Janelle Knox-Hayes, Miho Mazereeuw, Chris Cassidy, Aga Khan Agency for Habitat, and others, 2021.

“Planning & Design for Voluntary Relocation: A Case Study in the Pamir Mountains,” Collaborative Workshop Report. AKPIA@MIT, KVA, and Aga Khan Agency for Habitat. October 2019.

Hirsch, R., Rehman, A. and Wescoat, J.L. Jr. 2019. “Gardens of the Mughal Empire Bibliographic Update II -- 2008-18.”

[http://mughalgardens.org/PDF/updated\\_garden\\_bibliography.pdf](http://mughalgardens.org/PDF/updated_garden_bibliography.pdf)

“Disaster-Resilient Rurban Design: Chitravad Village, Gujarat, India.” Design Workshop report produced for the Aga Khan Agency for Habitat, AKPIA@MIT, and the Norman B. Leventhal Center for Advanced Urbanism, 2018.

“River Garden: Shalamar Garden and the Indus River Basin,” film produced by Shah Rukh and Schazeb, Center for Water Informatics, Lahore University of Management Sciences, 2017.

Worlin, M. et al. 2016. *Strengthening Blue Green Infrastructure in our Cities*. Überlingen: Liveable Cities Lab. 174 pp. [https://issuu.com/ramboll/docs/blue-green\\_infrastructure\\_lcl\\_20160?e=4162991/36504872](https://issuu.com/ramboll/docs/blue-green_infrastructure_lcl_20160?e=4162991/36504872).

Blue-Green Infrastructure case study reports: Emerald Necklace, Boston; and Mumbai’s Watershed, Streams, and Coastal Zone, Funded by the Ramboll Foundation, in collaboration with Dreiseitl Atelier, 2015.

World Bank, *Inclusive Heritage Conservation Revitalization: Draft Guidelines for Indian Cities*. Contributor and co-editor of full report and executive summary report. Washington, DC: World Bank, 2014.

MIT Center for Advanced Urbanism. *New Meadowlands*. Entry monograph of the “Rebuild by Design” competition, 2014.

Disaster-Resilient Design Bibliographies, 2013-2014. Afghanistan: Samira Thomas, Emily Williamson & James Wescoat; Tajikistan and Kyrgyzstan: Emily Williamson, Hanna Rutkouskaya, and James Wescoat. Pakistan: Hala

Malik and James Wescoat. Disaster Risk Management Initiative.  
[http://archnet.org/library/documents/collection.jsp?collection\\_id=1904](http://archnet.org/library/documents/collection.jsp?collection_id=1904).

Global Heritage Fund. "Saving Our Vanishing Heritage." Editorial Committee.  
[http://globalheritagefund.org/what\\_we\\_do/editorial\\_committee#](http://globalheritagefund.org/what_we_do/editorial_committee#) 2010.

National Research Council, Water Science and Technology Board, Steering Committee for, *Summary of a Workshop on Water Issues in the Apalachicola-Chattahoochee-Flint and Alabama-Coosa-Tallapoosa (ACF-ACT) River Basins*. Washington DC May 2009.

James L. Wescoat Jr., Florrie Wescoat, Rhonda Castillo and Rory Nicholson. *Green Landscape Guide*. In preparation for City of Chicago Department of Environment, 2009.

James L. Wescoat Jr. and Daniel Purciarello, "Park-Centric Design," in *Green Schemes: Garfield Park, Chicago*. Ed. Brent Ryan. Chicago: UIC City Design Center, 2008, pp.17-37

Nagaur Fort Garden and Waterworks Conservation Reports: "Waterworks Conservation at Nagaur Fort," and "Estimating Plant Water Requirements and Conservation Alternatives." 2007.

James L. Wescoat Jr., Florrie Wescoat, & Yung-Ching Lin, "Native Plants and Planting at the University of Illinois," Sustainable Landscape committee, 2007.  
[http://www.landarch.uiuc.edu/portfolio/facultypubs/downloadables/Native\\_Plants\\_of\\_East\\_Central\\_Illinois.pdf](http://www.landarch.uiuc.edu/portfolio/facultypubs/downloadables/Native_Plants_of_East_Central_Illinois.pdf)

Bazzell, Imani et al., "Great Campus Scoping Study: Compilation of Student Work" University of Illinois at Urbana-Champaign, 2007.

Committee (Chair). "Civic Commitment Summary Report and Recommendations" University of Illinois at Urbana-Champaign, Chancellor's Civic Commitment Task Force, 2007.

Committee (Chair). "Civic Commitment Experiments for the 21<sup>st</sup> Century." University of Illinois at Urbana-Champaign, Chancellor's Civic Commitment Task Force, 2006.

Amita Sinha, D.F. Ruggles, and James L. Wescoat Jr. 2005. *Champaner-Pavagadh: Panch Yatras, Gujarat, India*. Master plan for cultural heritage trails and interpretation that advance cross-cultural understanding; for the Heritage Trust (Baroda).

Amita Sinha, G.B. Kesler, D.F. Ruggles, and James L. Wescoat Jr. 2004. *Champaner-Pavagadh: Cultural Sanctuary, Gujarat, India*. Master plan for pilgrimage path and visitor's center; for the Heritage Trust (Baroda). Responsible for sections on landscape planning and site management, water resources, and vegetation.

J.L. Wescoat Jr. and Emily Hamilton, 2005, "The Confluence of Water, Society, and Ecological Design: Great Lakes Internet Resource Guide." Electronically published by the City of Chicago, Department of Environment.

Joyce Coffee et al., City of Chicago, Department of Environment, 2005, "The Confluence of Water, Society and Ecological Design: Session Summaries," Co-organizer and presenter. City of Chicago, Department of Environment:  
[http://egov.cityofchicago.org/webportal/COCWebPortal/COC\\_ATTACH/Water\\_Confluence\\_Session\\_Summaries\\_2.pdf](http://egov.cityofchicago.org/webportal/COCWebPortal/COC_ATTACH/Water_Confluence_Session_Summaries_2.pdf)

"Water and Sanitation." Report to the United Nations Commission for Human Settlements (UNCHS). June 2000. Adapted in chapter 10 of *Cities in a Globalizing World: Global Report on Human Settlements 2001*. London: Earthscan, 2001.

James L. Wescoat Jr. and Sarah Halvorson. "Ex Post Evaluation of Dams and Related Water Projects: Patterns, Problems and Promise." Report to the World Commission on Dams, South Africa. May 2000. Findings and recommendations incorporated in *Dams and Development: A New Framework for Decision-Making*. London: Earthscan, 2000.

Dennis Mileti, ed. *Disaster by Design*. Assessment of Research and Applications on Natural Hazards. Washington: Joseph Henry Press, 1999. Brief contributions on international and comparative hazards research.

"South Asia Development Triangle Initiative -- Transboundary Water Issues Paper," by J.L. Wescoat Jr. and H.C. Pereira, 1997 for the FAO Investment Centre and World Bank.

W.E. Riebsame with James Wescoat and Peter Morrisette. 1997. "Western Land Use Trends and Policy: Implications for Water Resources." Report to the Western Water Policy Review Advisory Commission. Denver, CO.

Marilee Long, Mark Kumler, Sharon Gabel, James L. Wescoat Jr., and Greg Luft, "People and Water: An Information Challenge," Colorado Water Resources Research Institute Task Force Report, 1996. Publication no. 6. Fort Collins: Colorado Water Resources Research Institute.

James L. Wescoat Jr., Gary Fleener, and Betsy Forrest, "Historical and Geographical Conditions in the Upper Mississippi River Basin," *Studies on Natural and Human Factors Related to Flood Management in the Upper Mississippi River Basin*. Report for the Scientific Assessment and Strategy Team, 1994.

James L. Wescoat Jr. and Jeffrey W. Jacobs. "Flood Hazards in Asia." *Natural Hazards Working Paper*. Boulder: Natural Hazards Center, July 1993.

James L. Wescoat Jr. and Robin M. Leichenko. "Complex River Basin Management in a Changing Global Climate: Indus River Basin Case Study in Pakistan, A National

Modelling Assessment. *Collaborative Paper*, no. 5. Boulder: CADSWES, Center for Advanced Decision Support for Water and Environmental Systems. June 1992.

### **Abstracts, Brief Publications, Reviews, and Web Publications:**

“Towards an Historical Geography of Human Biological Water,” The Hydrologic Cycle and Historical Societies Workshop, Duke University, Global Asia Initiative, 2022, <https://sites.duke.edu/watercycleworkshop/abstracts/>.

“Foreword,” In *Placemaking and Cultural Landscapes*, ed. Rana P. B. Singh and Olimpia Niglio. Dordrecht: Springer, in progress.

“Contemporary Discourse on Urban Landscape Heritage Conservation in India,” Proceedings of the National Institute of Urban Affairs conference on Historic Urban Landscapes, New Delhi, 2022.

Venice Biennale, “Moving Together,” MIT website advising for three case studies of voluntary planned relocation with detailed case study of a Tajikistan design workshop in collaboration with KVA MATx and the Aga Khan Agency for Habitat, May-November 2021. [www.movingtogether.mit.edu](http://www.movingtogether.mit.edu).

Murty, J.V.R.; Wescoat, James; and Verma, Piyush. 2020. “Towards an Improved District Rural Drinking Water Planning Framework,” *India Water Portal*. 28 September 2020. <https://www.indiawaterportal.org/articles/towards-data-driven-district-rural-drinking-water-planning-framework>.

Siddiqi, A., J. Tran, J., and J. Wescoat, J. 2018. “Modeling Growth and Diffusion of Groundwater Pumping at Multiple Sub-Provincial Scales.” American Geophysical Union Fall Meeting Abstracts.

“Integrating Mumbai’s blue-green infrastructure,” Indian Society of Landscape Architects, Bangalore meeting exhibition, 2016.

“A tale of two nallahs,” *Proceedings of the Indian Society of Landscape Architects*, forthcoming 2015.

"Cross-cultural water infrastructure research and design", MIT Center for Advanced Urbanism, 2015.

"Some Reflections..." on the conference on Culture as an Asset for Historic Cities," *Seminar* [India], no. 657, 2014.

“Mughal Garden Waterworks: Past and Prospect,” *LA! Journal of the Indian Society of Landscape Architects*. 38, 2013.

Stauffer, N. "Large Scale Irrigation: Understanding Water-Energy-Food Connections," *MITEI Energy Futures*. June 2013.

"Foreword," *Mapping Lahore*, by Dr. Abdul Rehman, 2013.

"Water-Conserving Design in South Asia," *Notes from the Field*, American Society of Landscape Architects, Water Conservation network publication, 2012.

"Letter on Water, Architecture, and Landscape," *Architectural Research Quarterly* (2012).

"Wisdom [in landscape architecture]", in *Zukunft aus Landschaft gestalten : Stichworte zur Landschaftsarchitektur*, ed. Hubertus Fischer. Munich: AVM-Ed. 2014, pp. 265-268.

Review of *Objects of Translation: Material Culture and Medieval "Hindu-Muslim" Encounter* (2009) by Finbarr Barry Flood in *Journal of the Society of Architectural Historians*, March 2011.

"Waterscapes and Water Conserving Design," *LA! Journal of Landscape Architecture* (India), Volume 25, fall 2009; expanded version published in *The Ismaili* (India), 2010.

"Profile interview: James Wescoat," *LA! Journal of Landscape Architecture* (India), Volume 23, Spring 2009, pp. 78-83.

*The Mughal Gardens Website*. <http://www.mughalgardens.org>. Principal researcher and writer. Site produced by Laura Schneider, Smithsonian Productions and designed by 9<sup>th</sup> Insight, Inc. 2002. Updated web pages 2008. Updated bibliography, 2019.

"Three Shalamar Baghs Workshop," *LA! Journal of Landscape Architecture* (India), 2008.

Review of *Histories of Garden Conservation*. Ed. Michel Conan et al. Florence: Leo S. Olschki, 2005 for *LA! Journal of Landscape Architecture* (India), 2008.

"Water Conserving Design: From Historic Landscapes to the 21<sup>st</sup> Century," *LA! Journal of Landscape Architecture* (India), vol 16, 2007, pp. 38-41.

"Garden and Waterworks Conservation Workshop at Nagaur Fort, Rajasthan", *LA! Journal of Landscape Architecture* (India), vol 16, 2007, pp. 16-17.

Review of *Managing Water Resources: Past and Present*. Ed. J. Trottier and P. Slack (Oxford: Oxford University Press) for *The Geographical Review* 96:4 (2006): 713-714.

Review of *Mythical Space, Cosmology and Landscape : Towards a Cultural Geography of India* by Jai Pal Singh and Mumtaz Khan (Delhi: Manak Publications) for *Journal of Cultural Geography*, 2005.

Review of *Historical Atlas of Islam* by Malise Ruthven with Azim Nanji (Cambridge: Harvard University Press) for *Historical Geography*, 2005.

“Islamic Environmental Ethics,” and “Islamic Gardens and Landscape Design” *Encyclopedia of Religion and Nature*, <http://www.religionandnature.com/encyclopedia/> Continuum, 2005.

Amita Sinha, G. Kesler, D.F. Ruggles, and J.L. Wescoat Jr., “Champaner-Pavagadh, Gujarat, India: Challenges and Responses in Cultural Heritage Planning and Design,” in abstracts of *The 7<sup>th</sup> US/ICOMOS Symposium*, Natchitoches, Louisiana, 2004.

Vince Bellafiore, Terry Harkness, Amita Sinha, J.L. Wescoat Jr. “The Romance and the Reality: A planning team envisions a cultural heritage district around the Taj Mahal, and researchers discover scientific evidence of a long-lost Moonlight Garden.” *Landscape Architecture Magazine* (October, 2003).

“The Taj Mahal in its Yamuna River Context,” *A+D Architecture and Design* (India), special issue on the Taj Mahal (December 2003), pp. 80-83.

James L. Wescoat, Jr. and David A. Kovacic, Review of *Wetlands Design* by Robert L. France, New York: W.W. Norton for *Landscape Architecture* (December 2003).

Review of *Places Where Men Pray Together: Cities in Islamic Lands, Seventh through the Tenth Centuries* by Paul Wheatley, University of Chicago Press. *Historical Geography* (2003).

“Browsing the Global Bookshelf: Bibliographic Sources and Methods for Landscape Architects,” *Landscape Architecture Magazine* (December 2003).

“Reflections on the Moonlight Garden (Mahtab Bagh) Project and Its Implications for Landscape Heritage Conservation in Agra,” *LA! Journal of Landscape Architecture* (India). Vol 2:1 (2002): 21-22.

Review of *Steps to Water: The Ancient Stepwells of India* by Morna Livingstone, Princeton University Press. For *Landscape Architecture Magazine* (2002).

“Environmental Geography: History and Prospect,” commentary on essay by B.L. Turner II in the *Annals of the Association of American Geographers* (March 2002).

“Review Essay: *Mississippi Floods: Designing a Shifting Landscape*,” by Anuradha Mathur and Dilip da Cunha, Yale University Press. For *Studies in the History of Gardens and Designed Landscapes* (2001), pp. 1-5.

“Landscape Heritage Conservation in Agra: An Historical-Geographic Perspective”; and “Landscape Heritage Conservation Timeline For Agra.” In *Taj Mahal Heritage*

*Conservation Plan*. Ed. Amita Sinha, et al. Lucknow and Urbana: University of Illinois, Department of Landscape Architecture, and Uttar Pradesh Tourism Department, 2000, pp. 4-9.

"West by Midwest: "Comments on 'Growth Management And Water Resource planning' By A. Dan Tarlock." In proceedings of *Improved Decision-Making for Water Resources: The Key to Sustainable Development for Metropolitan Regions*. Chicago: Great Cities Institute, University of Illinois at Chicago, 2002.

"History, Theory, and Graduate Education: A Vitruvian Challenge," *Progress in Human Geography*, Viewpoint, 24,1 (2000): 19-21.

Review of *Mapping an Empire: the Geographical Construction of British India, 1765-1843*, by Matthew H. Edney. *Historical Geography*, 27 (1999): 251-4.

Commentary on *Environmentalism*, by Timothy O'Riordan, in *Progress in Human Geography*, "Classics in human geography revisited," 23:4 (1999): 610-11.

Review of *The Environment and Christian Ethics* by Michael Northcott (Cambridge University Press) for *Quarterly Review of Biology* (1998).

Editorial consultant on the Pakistan entries for the new *Columbia Gazetteer of the World*. Ed. Saul Cohen. 3 vols. New York: Columbia University Press, 1998.

"Obtaining Environmental Information On-Line," *Environmental Impact Guidelines*, no. 2. Rome: FAO Investment Centre, 1997.

Review of *History of Islamic Philosophy* by S.N. Nasr and O. Lehman, 2 vols., Routledge Press. For *Canadian Philosophical Reviews*, 1996.

Review of *Boundaries and Frontiers in Medieval Muslim Geography* by R.W. Brauer, Philadelphia, American Philosophical Society, 1995; and *The Rise of Islam and the Bengal Frontier, 1204-1706*, Berkeley, University of California Press, 1993. For *Historical Geography*, 1997.

Review of *L'homme et secheresse* by Monique Mainguet, Paris, Masson geographie, 1995. For *Environment* magazine (1996).

Review of *Slide Mountain, The Folly of Owning Nature* by Theodore Steinberg, Berkeley, University of California Press, 1995, for *Common Knowledge* (1996).

"Lahore" entry, *The Dictionary of Art*, Macmillan Publishers (1995).

"Varieties of Geographic Comparison in *The Earth Transformed*," review forum in



*Annals of the Association of American Geographers* 84:4 (1994).

Review of *Water in Crisis*, ed. Peter H. Gleick, Oxford University Press. For *Environment* (May 1994).

"Climate Change and International Water Problems: Issues Related to the Formation and Transformation of Regional Organizations," in *The Role of Regional Organizations in the Context of Climate Change*. NATO Advanced Research Workshop proceedings. Ed. M. Glantz. Dordrecht: Kluwer Academic Publishers, 1994, pp. 96-103.

Review of *A Historical Atlas of South Asia*, by J. Schwartzberg, Oxford University Press. For the *Annals of the Association of American Geographers* (1993).

Review of *Vision or Villainy: Origins of the Owen's Valley-Los Angeles Water Controversy*, Abraham Hoffman, Texas A&M Press, 1991. For *Environment and Planning A* (1993): 149-50.

Review of *Wagering the Land: Ritual, Capital, and Environmental Degradation in the Cordillera of Northern Luzon, 1900-1986*, by Martin W. Lewis, University of California Press, 1992. For *The Professional Geographer* 45 (1992): 116.

Review of *Integrated Water Management*, ed. Bruce Mitchell, Bellhaven Press, 1990. For *Global Environmental Change: Human and Policy Dimensions* (March 1992).

"The [Bangladesh] Flood Action Plan: A New Initiative Confronted by Basic Questions." *Natural Hazards Observer* 16:4 (1992): 1-2. Reprinted in NHRAIC Working Paper no. 77 (1992). Reprinted in *Natural Hazards* (1992).

"Climate Warming in Developing Countries: Issues and approaches in the Indus River Basin of Pakistan," in *Proceedings: American Society of Landscape Architects, Landscape/Land Use Planning*. Kansas City: ASLA, 1991, pp. 105-13.

Article on "The Colorado River," *Encyclopedia Britannica*; revision of article by M. John Loeffler (1994).

## **Grants and Projects:**

"Moving Together," research station in the 2020 Architecture Venice Biennale. Sheila Kennedy, Janelle Knox-Hayes, Miho Mazereeuw, Chris Cassidy, and others. \$45,000.

"Equitable Resilience: An Essential but Under-Examined Aspect of Sustainable Urban Systems." National Science Foundation; Principal Investigator, \$50,000. 2019.

"SRI: Scaling, Replicating, and Integrating Village Water Planning Innovations," Tata Center for Technology and Design, Approx. \$200,000. 2018-2020.

“Evaluating Micro-Grids in the Water-Energy Nexus,” Masdar Institute, Abu Dhabi, Co-Principal Investigator 2017-18; Principal Investigator 2018-19, \$150,000, 2017-2019.

“Evaluating Off-Grid Hydro Energy Systems in Irregular Channel Flow for Intensive Agriculture in Developing Countries,” MIT-Tata Center for Technology and Design, support for research scientist, graduate student, and research expenses, 2016-2018. Approx. \$200,000.

“Advanced Tools for Rurban Water Management,” MIT-Tata Center for Technology and Design, support for two graduate students and research travel, 2015-2017, Approx. \$200,000.

“Blue-Green Urban Infrastructure in High Density Cities,” Co-PI on grant from the Ramboll Foundation, 2014-2015. P.I. Zeppelin University, Germany. MIT grant, 104,000 Euros.

“Coupling Urban Tank Restoration with High-Value Horticultural Production: A Compact Water-Conserving Design Approach,” MIT-Tata Center for Frugal Technology and Design, 2013-2015. P.I. Funding for two graduate students and field research expenses. Co-I Miho Mazereeuw. Approx. \$200,000.

“Linking Energy Intensity and Water Use Efficiency,” MITEI seed grant. Co-P.I. with Dr. Afreen Siddiqi, 2011-12. \$150,000.

“Environmental Impacts of Hydropower Alternatives,” grant from MIT Energy Initiative, 2010-11, P.I. with Drs. Afridi, Humair, and Siddiqi. \$100,000.

Indian Institute for Human Settlements. Rockefeller Foundation Grant (L. Vale and B. Sanyal PIs). Responsible for Environmental Planning curriculum development with Amit Prothi. \$13,000.

Windsor Road Corridor Design Charrette, Champaign-Urbana, IL. Chancellor’s grant for landscape architecture charrette in fall 2008. \$50,000.

NOAA-Cooperative Institute for Limnology and Ecosystems Research. Proposal for renewal of 5-year cooperative agreement. Co-Investigator. PI: Donald Scavia, University of Michigan. Operating costs plus indefinite quantity agreement research funding. Awarded 2007.

UIUC Environmental Council. “Re-Envisioning the Great Lakes and Upper Mississippi River Basin.” 2006-07. PI with four Co-PIs. \$15,000.

UIUC Chancellor’s Civic Commitment Task Force. “Great Campus Curriculum and Environmental Design Scoping Study.” Collaboration between the Urban League of

Champaign County and the Departments of Landscape Architecture; Curriculum and Instruction; and Library and Information Sciences. \$10,000. P.I., 2006-07. Reported in Jodi Heckel, "A Bold Vision, A Daring Initiative," *The News-Gazette*, July 30, 2006, p. A-3.

Mehrangarh Museum Trust, "Strategy for Mughal-Rajput Garden Conservation at Nagaur Fort, Rajasthan, India." 2004-06. ~\$20,000 workshop funding. PI with ~20 participating researchers.

Caterpillar Foundation, "Ecological Site Engineering," grant for curriculum development, AY 2005-06. \$4,000. Co-Investigator.

UIUC International Council grant to Amita Sinha, D.F. Ruggles, and J.L. Wescoat Jr. for "The Three Shalamar Gardens Conference: International Collaboration on Cultural Landscape Heritage Conservation in South Asia." 2006-7. \$8,000. PI.

UIUC Research Board to Amita Sinha and J.L. Wescoat Jr. for the "Champaner-Pavagadh World Heritage Site Landscape Conservation Plan," sponsored by Baroda Heritage Trust, 2005. \$8,500.

The Crowley Creek Collaboration. Watershed restoration project in Neskowin, Oregon. Sponsored by the Sitka Center for Art and Ecology. Principal investigator: T. Allan Comp, 2004-05. ~\$1,500. Co-Investigator.

Champaner-Pavagadh World Heritage Site, Landscape Conservation Workshop, sponsored by Baroda Heritage Trust, 2005; ~\$10,000 grant for field expenses. Co- I.

Graham Foundation for Advanced Studies in the Fine Arts, grant for *Places of Power: Economic and Political Driving Forces of Landscape Change*, \$10,000 (with Douglas Johnston), 2004-05. P.I.

Wadsworth Endowment, Department of Landscape Architecture, UIUC, grant for *Places of Power: Economic and Political Driving Forces of Landscape Change*, \$15,000 (with Douglas Johnston), 2004-05. P.I.

Landscape Architecture Foundation, Landscape Futures Initiative, grant for *Places of Power: Economic and Political Driving Forces of Landscape Change*, \$25,000 (with Douglas Johnston), 2003-04. P.I.

*Sasaki Foundation* – Grant for Integrative Environmental Design Studio (Landscape Architecture, Architecture, and Urban and Regional Planning). \$15,000, 2003-04. Proposal author.

Champaner-Pavagadh, "Landscape Studio Project." Baroda Heritage Trust. \$20,000 for faculty and student travel to India, 2002-03. Co-I.

National Science Foundation, Geography and Regional Science Program. Principal investigator. "Water, Poverty and Sustainable Livelihoods in Colorado." \$210,681. Co-investigators include Anthony Bebbington, Charles Howe, and John Wiener. 1999-2002.

Smithsonian Institution, Foreign Currency, Travel Grant. "Mehtab Bagh Project." June 1998 and October 1999. Responsible for field research on garden waterworks at a site opposite the Taj Mahal in Agra, India. In collaboration with the Archaeological Survey of India. Elizabeth Moynihan, Principal Investigator.

NOAA, Office of Global Programs, Integrated Regional Water Assessment in the Interior West. Seed grant for research on effects of climate variability on acute water problems faced by low-income social groups, \$10,000, 1999-2000.

University of Colorado, Global Change Research Program, "Water Resource Management and Design at the University of Colorado." To organize a collaborative program among the colleges of arts and sciences, engineering, and environmental design. 1994-95. \$8,500.

University of Colorado, Natural Hazards Center, "Evolution of International Flood Hazards Programs in Asia, 1900-1992." \$4,000.

U.S. Environmental Protection Agency. "Complex River Basin Management in a Changing Global Climate: Indus Basin, Pakistan." Coordinated international case study of potential impacts and adjustments involving 23 Pakistani scientists, engineers and planners, 1989-1992, in conjunction with the Pakistan Water and Power Development Authority. W.E. Riebsame, Principal Investigator. Pakistan field research budget of ~\$50,000.

Smithsonian Institution, Foreign Currency Program, Travel grant for research in India and Pakistan. "Garden, City and Empire: The Historical Geography of Mughal Lahore." September 1987-1993. \$289,000 in PL-480 funds. Multi-disciplinary research project with the Pakistan Department of Archaeology; Department of Architecture, University of Engineering and Technology in Lahore, and Arthur M. Sackler Gallery in Washington, DC. Supervised field research, site documentation, and mapping (Principal Investigator).

Colorado Endowment for the Humanities. Small grant. "Colorado Water: The Next 100 years." Technical Advisor and speaker. 1989-91 (Barbara Preskorn, Principal Investigator).

## **Teaching and Advising:**

### ***Introductory Undergraduate Courses:***

Landscape Experience, Inquiry, and Design (~80 students)

Geographies of Global Change (~100 students) Environmental Systems:

Water and Climate (~150 students)

***Upper Division Undergraduate and Introductory Graduate Courses and Studios:***

Chicago Green Neighborhood Design Studio (17 students) with University of Illinois at Chicago architects and planners; and City of Chicago Department of Environment (Spring 2007).  
Wetland Design Studio (~25 students)  
Urban Water Seminar (~25 students)  
Water Resources Management (~40 students)  
Colorado-Kashmir Seminar: Peacebuilding in Mountain Environments (~12).

***Graduate Seminars and Studios:***

Doctoral Colloquium in Advanced Urbanism (~5 students)  
Disaster-Resilient Design Seminar (~10 students)  
Design Thesis Studio (~12 students)  
Landscape Research Seminar (~15 students)  
Theory and Practice of Landscape Architecture (~15 students)  
Comparative Environmental Studies Seminar (South Asia, Central Asia, Middle East, North America) (~15 students)  
Environmental Policy Responses to Global Change Seminar (~15 students)  
History and Theory of Geography (~15 students)  
Environmental Geography Seminar (~15 students)  
Water Resources Research Seminar (~15 students)  
Mughal Landscapes: History, Heritage, and Design Seminar (~5 students)  
Water, Landscape, and Urban Design Workshop (~10-15 students)  
Urban Landscape Heritage Conservation (India) (~10 students)  
Water in Environmental History, Policy, and Design Reading Group (~5-10 students)  
Islamic Gardens and Geographies (~10 students)  
Thesis prep and pre-thesis prep seminars (5-10 students)  
Rurbanism Design Workshop (9 students)

***Other Short-Term and Collaborative Teaching & Research:***

North Carolina State University, College of Design, 2022 design charette on memorialization for justice in North Carolina, advisor to a team of 5 students.  
Aga Khan Agency for Habitat, Village relocation design workshop, Tajikistan, summer and fall 2019 with Prof Sheila Kennedy (7 students).  
MITx, Online modules on water conservation and blue-green infrastructure for course on *Site Planning*, produced by Gary Hack, 2019.  
AKTC Student seminar on Conservation+Development, New Delhi, speaker, August 2018  
AKPIA-AKAH-LCAU Gujarat Rurban Design Workshops, August 2017, and January 2018. Co-instructor.  
UNDP Fiji-affiliated supervision of student independent study on “Ridge to Reef Adaptation to Climate Change,” summer 2014.  
AKPIA-AKPBSI field course, Jamnagar, Gujarat, January 2014.

Aga Khan Planning and Building Services (AKPBSI), India, Design workshop and Symposium, December 2012.  
 AKPIA-AKTC Field courses in Delhi, January 2009, 2010, 2012  
 Rapid Visual Site Analysis in Post-Disaster Reconstruction, Minami Sanriku, Japan, summer short course 2011; summer intensive site planning course, 2012  
 Disaster-Resilient Design Workshop, 5-day studio at the University of Engineering and Technology-Lahore, 2011.  
 Aga Khan Program for Islamic Architecture, “New Campuses in the Islamic World” project, 2009-2012 with AKPIA research assistants.  
 Champaner-Pavagadh (India) Design Studio – 9-10 students over Winter Break, 2003, 2005.  
 Calumet Steel Heritage Design Studio – with Design Workshop, Inc., and the Southeast Environmental Task Force -- Alternative Spring Break 2005 (~20 students).  
 Contemporary Environmental Design in Chicago, Summer Field Course, 2003 (~10 students).

***Teaching Awards and Grants:***

Fall 2002 – “List of Teachers Ranked as Excellent by Students” UIUC.  
 Fall 2003 -- “List of Teachers Ranked as Excellent by Students” UIUC.  
 Fall 2007-- “List of Teachers Ranked as Excellent by Students” UIUC.

**Students Supervised and Their Fields (\*=completed):**

***Ph.D. Advisor Geography (chronological, 1985-2002)***

Mary McNally (Chicago): Native American water rights\*; Associate Professor, Eastern Montana State University.  
 Random DuBois (Chicago): Water management in the Philippines\*; Senior Environmental Officer, U.N. Food and Agriculture Organization Investment Centre, Rome.  
 Jeffrey Jacobs (Colorado): Water management in the Mekong\*; Director, Water Science and Technology Board, National Research Council.  
 Kate Berry (Colorado): Native American water rights\*; Professor of Geography, University of Nevada-Reno.  
 Susan Edwards Baird (Colorado): Landscape history and design in Denver\*; Senior Landscape Architect, Denver Parks Department.  
 Jonathan Mitchell (Colorado): Waterborne disease and primary school education in Pakistan\*. Former Manager, Aga Khan Education Service-Pakistan; Research Triangle Institute, NC; private philanthropy.  
 Daniel Bedford (Colorado): Water management in Central Asia\*; Professor of Geography, Weber State University, Utah.  
 Danish Mustafa (Colorado): Irrigation and flood hazards in Pakistan\*; Reader, Kings College, London.  
 Hanna Gosnell (Colorado): Endangered Species Act implementation in the San Juan River Basin\*; Associate Professor, Oregon State University.

Sarah Halvorson (Colorado): Water, gender, and health in northern Pakistan\*;  
 Professor and chair, Department of Geography, University of Montana.  
 Suzanne Michel (Colorado): U.S.-Mexico water management in the Tijuana Basin\*;  
 Part-time faculty at the University of San Diego.  
 Lisa Headington (Colorado): Urban Riverfront Parks and Eviction of the Homeless in  
 Denver.\* Independent scholar and community planning, Denver, CO.  
 Andrea Ray (Colorado): Climate and Water Management in Colorado\*, “Research  
 Scientist, NOAA Climate Diagnostic Center, Boulder, CO.  
 Paul Lander (Colorado): The Aesthetics of Urban Water Conservation\*, former  
 director of Water Conservation, City of Boulder, CO.

***M.A. Advisor Geography***

Elizabeth Brooks: Water management in the Great Plains\*. PhD; Independent scholar,  
 Washington, D.C.  
 George Clark: International water treaties in South Asia and the Middle East\*. PhD  
 Environmental Resources Librarian, Harvard University.  
 Whitney Seymour: Urban water management in Chicago\*.  
 Robin Leichenko: Urban water management in Karachi\*. Associate Professor,  
 Rutgers University.  
 Sharon Gabel: Water management in the San Luis Valley\*. MBA Human Resources,  
 University of Denver.  
 Courtney Hauge: International water management in the Nile\*. PhD; Associate Professor,  
 Utah State University.\*  
 Laurel Phoenix: Water Management in Colorado\*. PhD; Associate Professor,  
 University of Wisconsin, Oshkosh.  
 Sarah Halvorson: Women and Water in Northern Pakistan\*.  
 Tamara Laninga: Watershed Management in the Western U.S.\* Assistant Professor,  
 University of Idaho.

***MLA Thesis Advisor (Illinois)***

Wisa Kompayak – Bangkok Chao Phraya Waterfront Design.\* EDSA, Florida.  
 Nanguo Yuan – Wetland Conservation Design in the Indiana Dunes National Park\* SWA  
 Group, Dallas, TX.  
 Harsh Goel – Urban Landscape Design in Agra, India.\*; Ahmedabad, India  
 Jihjung Jung – Riparian Landscape Design, Allerton Park, IL\* HOK St. Louis

***MLA Committee Member (Illinois)***

Jingfang Zhao: Chinese Urban Water Culture Park\*  
 Jing Dong: Shanghai Waterfront Design\*  
 Lu Sun: Landscape and high-density housing in Beijing\*  
 Wen Huang: Denver urban design\*  
 Qing Ji: Hudson Riverfront design\*  
 Carolina Garcia: Chinampa heritage landscape design\*  
 Lucy Cross: Napa Valley landscape design\*

***MArch (MIT) Advisor/Co-advisor***

Danielle Brown, Water conserving design, Greece\*  
Runo Okiomah, Water conserving design, Nigeria\*  
Emily Lo, Rubble in post-disaster construction, Haiti  
Matthew Bunza, Post-disaster slope design, Minami Sanriku, Japan\*  
Rudy Dieudonne, Disaster-resilient design in Haiti\*  
Jie Qian, Canal heritage design in China\*  
Alice Kao, Owens Lake Anthropocene park, California\*  
Christina Chen, Mountain landscape, China\*

***MArch Reader***

Victoria Lee\*  
Natsuki Maeda\*  
Carolyn Jenkins\*  
Ali Qureshi\*  
Kyung Sik Kim\*  
Nynika Jhaveri\*

***MCP, M.Eng., M.S. TPP, M.S.SDM Advisor (MIT)***

Carolyn Hayek: Traditional water management in Lebanon\*  
Victoria Wolff: Design for sea level rise in East Boston\*  
Debmalya Guha: Urban design in Kolkata\*  
Samira Thomas: Gardens in early childhood schools Afghanistan\*  
Marisa Lau: Water and culture in Cyprus\*  
Zheng Jia: Bangladesh cyclone shelter planning and design\*  
Alex Marks: Green infrastructure for stormwater in Boston\*  
Keith Tanner: Water planning in California\*  
Toral Patel: Urban climate adaptation in India\*  
Sneha Mandhan: Streetscape design in Bangalore\*  
Himani Gupta, CEE and TPP, Community Water Budget Analysis in rural India.\*  
Marianna Novellino. Community water programs, a systems dynamics approach.\*  
Ayesha Shahid: Multi-level planning in Punjab, Pakistan\*  
Rebecca Hui: Peri-urban planning in Maharashtra\*  
Paige Midstokke: Drought and scarcity planning in Maharashtra\*  
Sabah Usmani: Canal hydropower in India\*  
Riddhi Shah: Early childhood education in peri-urban India\*  
Iqra Nadeem: Water microgrid planning in Abu Dhabi\*  
Shail Joshi: Water planning in Bundelkhand\*  
Radhika Singh: Water planning in Bundelkhand\*

***MCP Reader (MIT)***

Shoko Takemoto: Climate change and urban flooding in Tokyo and Bangkok\*  
Miriam Solis: Water and environmental management\*  
Melissa Sapuan: Urban climate and disaster resilience: London and New York\*  
Daniel Broid: Disaster resilient institutions\*



Keren Charles: Drug trafficking interventions in Trinidad and Tobago\* Ann  
 Ariel Vecchio: Green infrastructure in urban planning\*  
 Colleen McHugh: New Orleans vacant lots\*  
 Zach Youngerman: Stormwater conservation policy\*  
 Sasha Shyduroff: Stormwater management policy\*  
 Eduardo Sabo: Green Streets in San Francisco\*  
 Aurora Bassett, Heritage conservation in Myanmar\*  
 Pim Jular, Disaster risk reduction in Thailand\*  
 Wan Chantavilasvong, Youth futures in Thailand\*  
 Nicholas Cohen, Coastal urbanism\*  
 Akemi Sato, Earthquake resilience in Mexico\*

***SMArchS Advisor (post-professional architecture degree at MIT)***

Zameer Basrai: Public architectural philanthropy of Ismaili communities in Bombay\*  
 Priyanka Kapoor: Activating the Adiganga, Kolkata, India.\*  
 Laura Delaney, Expectant adaptive design, Helsinki.\*  
 Farshid Emami, History of Abbasabad Hills projects in modern Tehran.\*  
 Marium Gul, Disaster resilient design, Thatta, Pakistan.\*  
 Chris De Vries, Danube urban design.\*  
 Matti Wirth, Water conserving design, Arizona.\*  
 Hanna Rutkouskaya, Uzbek heritage in the late Soviet era\*  
 Summer Sutton, Moroccan heritage conservation\*  
 Prassanna Raman: Karachi water and conflict\*  
 Jenine Kotob: Schools and society in Palestine\*  
 Layla Shaikley: Incremental IDP Housing in Baghdad\*  
 Sreoshy Banerjea: Beyond Shock City Riverfront Ahmedabad\*  
 Emily Williamson: Water and community in coastal Ghana\*  
 Hala Bashir Malik: Home and housing in modern Lahore\*  
 Allison James: Landscape heritage conservation\*  
 Tanya Ismail: Energy conserving design\*  
 Muneerah Alrabe: Kuwait urban design\*  
 Byongjun Kim: Urban transportation design in Boston\*  
 Caner Oktem: Coastal reclamation in Tokyo Bay\*  
 Xiang Xu: Walled campus redesign in China\*  
 Ranu Singh: City-village relationships in Delhi\*  
 Sera Tolgay: Water planning in the Jordan Valley\*  
 Angelos Siampakoulis: Los Angeles Suburbanism\*  
 Yi Liu: Urban transportation design China\*  
 Sharmeen Sayed Jaleel Dafedar: Heritage conservation in Kashmir\*  
 Rabeeya Arif: Heritage conservation in Lahore Pakistan\*  
 Ankur Podder: Energy and urbanism in island environments\*  
 Sea Hoon Kim: Technology-enabled infrastructure and urban real estate\*  
 Piyush Verma: Water planning in India\*  
 Mengqi He: Water justice and the Los Angeles River\*

Rachel Hirsch: Mughal architecture and landscape in the Deccan\*

***SMArchS/BT Reader (MIT)***

Sandra Frem: Beirut River restoration\*

Nida Rehman: Urban canal in Lahore\*

Zahraa Nazim Sayyid: Earthquake hazard in California\*

Andres Bernal: Mountain development in Bogota\*

Luisa Schettino: Border urbanism in Haiti-Dominican Republic\*

Alexander Weigering, Riverine urbanism in Peru\*

Ayesha Sheikh, German orientalist architecture\*

***BSAD Reader (MIT)***

Esther Chung: Los Angeles River tributary design\*

***Ph.D Advisor and Committee Member (MIT)***

Beaudry Koch, Water management in the Arkansas River Basin.\* DUSP

Amit Prothi, Water, environment, and urbanization in India. DUSP

Karen Noiva. Water and urban metabolism. ARCH Building Technology.\*

Mariam Allam, Water management in the upper Nile basin. Civil Engineering.\*

Alpen Sheth. Drought insurance in India, DUSP\*

David Taylor. Urban water distribution systems in India. MECHE\*

Zachary Lamb. Deltaic hazards in the U.S. and Bangladesh, DUSP\*

Sarah Fletcher, Value of flexibility in water resources planning, IDSS\*

Yasmin Zaerpour, International negotiations on the Nile River Basin.\*

Lilian Bui. Island disaster warning and planning DUSP (Advisor).\*

Prassanna Raman, Sanitation in Chennai, India\*

Andrea Beck. Urban water DUSP\*

Courtney Lesoon, Early Islamic learning and urbanism, AKPIA

**Professional and Public Service:**

MIT, University service

- Campus
  - o Advisory board, Committee on campus wayfinding, 2019
  - o Co-organizer Conference on the Resilient Reconstruction of the Caribbean 2017
  - o Faculty Quality of Life committee, 2017
  - o West Campus Planning Committee, 2017-present
  - o MIT Committee on Volpe Transportation Center development, 2017-present
  - o Steering Committee for the Sustainable Campus Stormwater and Landscape Ecology Plan, 2016-present
  - o Institute Planning Committee, 2014-present
  - o Faculty Campus Planning Committee, 2014-present
  - o East Campus Planning Steering Committee, 2013-14
  - o MIT-Tata Technology and Design Program Committee, 2013-present
  - o Killian Court landscape architect selection committee, 2013

- MIT Museum-Science Festival talk on, “Rivers of Ice,” April 2012
- MIT-Japan Tsunami memorial talk, March 2012
- Environmental Research Forum, “Water” talk, December 2011.
- Co-organizer of “Rethinking Water: A Critical Resource”, May 2010.
- Environmental Research Council, 2008-12
- Faculty Environmental Network, 2008-10
- Department of Architecture and School of Architecture and Planning
  - Co-Director, Leventhal Center for Advanced Urbanism, 2016-present
  - Member, School Council, 2016-present
  - Director, M.S. program in Architecture and Urbanism, 2015-2018
  - Associate Department Head, 2015-6.
  - Faculty mentor (2 Assistant Professors)
  - Undergraduate student advisor
  - MArch student advisor
  - M.S. student advisor
  - Water Workshop organizer, Spring 2009
  - Landscape + Urbanism representative, 2008-10
  - ArchNet advisory committee
  - Member and chair of many internal promotion and tenure committees, most recently chaired promotion cases in 2018-19 and 2019-20.
  - SMArchS faculty colloquium panel
  - Urbanism faculty searches, 2011-12
  - Council on Graduate Studies, Cabinet, SMArchS, 2011-12, 2015-present
  - Design Faculty Search Committee, 2015
- Aga Khan Program for Islamic Architecture
  - Evening With... series organizer, “History, Theory, and Design Practice,” Fall 2008; 2011-12; 2015-2016
  - History, Theory and Criticism doctoral admissions, 2009-
  - *Muqarnas* editorial advisory board, 2009-
  - Aga Khan library search, 2011
  - Workshop on Comparative Water Research organizer, 2012
  - Acting director, 2015-16
- 2008-19 Studio Reviews (MIT):
  - Boston urban design studio
  - Heart of Doha design seminar
  - Japan suburban design studios
  - Mumbai urban design studio
  - MArch thesis prep reviews
  - SMArchS thesis reviews
  - 10K house Japan
  - Japan post-tsunami studio

- Venice infrastructure studio
- Saudi Arabia housing studio
- East St. Louis urban studio
- Creative Responses to Conflict and Crises studio
- Joint SMArchS-CDD first year studio
- Louisiana wetland studio
- San Francisco resilience studio
- Japan post-disaster studio
- Core III Baja California Studio reviews, 2015, 2016, 2017, 2018
- Chicago urban design studio, 2015
- Venice heritage review, 2016
- Architecture and Planning joint studio review, 2016
- Architecture Core 1 Studio review, 2016
- China urban design studio, 2019

University of Illinois, Department Head responsibilities:

- Faculty recruitment, mentoring, development, evaluation, retention.
- Curriculum: professional internship program; graduate curriculum reorganization to focus on community-based design, ecological design, and cultural landscape heritage design; and a thesis course sequence to increase on-time degree completion.
- Teaching: developed first-semester project courses for undergraduate and graduate students (and *LA101: Landscape Experience, Inquiry and Design* and *LA501: Landscape Theory and Practice*).
- Budgeting: ~\$1.5 mn in annual funds and comparable amount in endowment principal.
- Accreditation: BLA and MLA professional degrees, 2008; full 6-year reaccreditation.
- Committees: annual faculty committee assignments; ex officio membership on Masters, PhD, space, and computing committees.
- Support staff supervision and professional development
- Alumni communications and fundraising (~\$150,000/yr).
- Re-accreditation planning for BLA and MLA degrees, Spring 2008.

University of Illinois at Urbana-Champaign, College-level administrative service, 2002-present:

- College of Fine and Applied Arts, Strategic Planning Initiative, Department representative, 2005-07.
- College of Fine and Applied Arts, Chair of Reappointment Review for the Director of the School of Music, spring 2006.
- College of Fine and Applied Arts, Chair of Task Force on Interdisciplinary Initiatives in the Arts Committee, 2004.
- College of Engineering. Steering committee for a new Institute for the Study of Intensively Managed Landscapes, 2005-present.
- College of Liberal Arts and Sciences. Member of a new Center for Water as a

Complex Environmental System, member, 2005-present.

- College of Fine and Applied Arts, Chair of search committee for Head of the Department of Dance, 2004-05.
- College of Fine and Applied Arts, Member of search committee for Director of the School of Architecture, 2003-04
- College of Fine and Applied Arts, member of City Planning and Landscape Architecture Library committee, 2004.
- College of Fine and Applied Arts, member of Courses and Curriculum committee, 2004.

University of Illinois at Urbana-Champaign, Campus-level administrative service, 2002-present:

- Chair, Chancellor's Task Force on Civic Commitment for the 21<sup>st</sup> Century, 2006-present.
- Member, Vice Chancellor's International Advisory Council, 2007
- Member, International Council, 2004-07.
- Member, Community-Based Learning Grants committee, 2004.
- Member, Environmental Council, 2003-05.
- Member, Committee for a Sustainable Environment, 2004-06
- Steering Committee, Human Dimensions of Environmental Systems 2003-4
- Member, Allerton Park Policy Advisory Board, 2003-2007.

University of Colorado, administrative service, 1989-2002

- Associate Chair and Director of Graduate Studies, 1999-2002. Facilitated curriculum expansion in the field of Human-Environment relations; and implemented first semester course on *History and Theory* for incoming graduate students.
- Graduate Studies Committee, 1989-91; 1992-93; 1998-99.
- Chair, Personnel Promotion and Tenure Committees, 2000-01
- Summer Chair, 1999.
- Undergraduate Studies Committee Chair 1993-94; 1995-96.
- Personnel Committee, 1990-92; 1997-98. Reappointment committee chair.
- University of Colorado Faculty Retention Task Force, 1999-2000.
- Internal Review Committee for Anthropology, 1998.
- Natural Hazards Center Advisory Committee, 1992-2002
- Natural Hazards Director Search Committee, 1992-3
- Environmental Conservation Committee, 1992-3
- Boulder Faculty Assembly Representative, 1993-6
- Geography representative, Environmental Policy Certificate, 1993-2000.
- Global Change and Environmental Quality, Grant review committee, 1995.
- University of Colorado representative for the Boulder Childrens' Water Festival, for 500+ fifth grade students: 1993, 1994, 1995.

*Extramural Service:*

Aga Khan University, Faculty of Arts and Sciences, ad hoc advisory meeting, 2021.  
International Advisory Board, Karachi. 2022-.

Member, Research Advisory Group, Indian Institute for Science, Education and  
Research, Water Centre, Pune. 2021-

National Academies, PEER grants, Bhutan water project proposal review, 2021.

Member, International Association of Hydrological Sciences IAHS Working Group,  
Panta Rhei – Everything Flows: Change in Hydrology and Society, IAHS Scientific  
Decade 2013-2022.

Aga Khan Development Network workshops on Higher Education Forum on  
Humanities, Paris, 2020; and Learning in the 21<sup>st</sup> Century, Brown University, 2020.

Aga Khan Foundation, peer review on landscape design alternatives, Houston, 2019

Columbia University, Department of Urban Design, Pune riverfront design reviews,  
2019; and conference on water and deltas, 2019.

Valencia, Huerta design review, Arancha Munoz, Harvard Graduate School of Design,  
2018.

Kabul University, external review for proposed curriculum in Environmental Science,  
Natural Resources Management, and Disaster Management, 2018.

National Research Council, Resilience Roundtable, Committee on Urban Flooding,  
2017-2018.

Government of Punjab, Pakistan. Member, Punjab Water Policy Review Committee,  
2017.

Lahore University of Management Sciences, Syed Babar Ali School of Science and  
Engineering. 2009-present. Chair 2018-21.

2021 – Central Building planning advisory committee.

2019-20 – Member, Dean Search Committee

2017-18 – Chair of committee to establish a new Department of Civil and  
Environmental Engineering

2016 -- Founding Chair, Advisory Group, Centre for Water Informatics and

Technology (WIT).

2009-present -- Advisory Board, Lahore University of Management Science, Syed Babar Ali School of Science and Engineering. Chair, 2019-21. External Promotion and Tenure Committee (review of all promotion and tenure cases).

Advisor, Mumbai University and Tata Trusts, constructed wetlands design project, 2016.

Board, Friends of Landscape Architecture Foundation, New Delhi, India (2016-present)

World Bank, peer review of “Programmatic TA on Inclusive Urban Revitalization in India: Support to HRIDAY Implementation,” September 2015.

Harvard, Department of Urban Design and Planning, Agra riverfront urban design reviews, 2015.

World Monuments Fund and Archaeological Survey of India, peer review on Agra Riverfront Garden conservation, 2014.

World Bank, peer review on “Pro-poor tourism in Uttar Pradesh, India,” project, 2014.

Aga Khan Trust for Culture. Landscape conservation at the Qutb Shahi tomb complex, Hyderabad, peer review, 2014.

National Research Council, Water Science and Technology Board. Committee chair. “Strategic Research for Integrated Water Management in Large Deltaic Regions.” 2013.

Aga Khan Development Network, Disaster Risk Management Initiative, Task Force on Disaster Risk Reduction in Village Planning, 2012-2013.

Aga Khan Foundation. King’s Cross Islamic gardens design. Advisor and oversight committee, 2013-present.

World Bank, India, peer review for project concept note, 2013.

National Research Council, Board on Atmospheric Science, “Committee on Himalayan Glaciers and Climate Change,” 2011-2012.

Advisory Board, National Science Foundation, Socio-Environmental Synthesis Center, Annapolis, MD, 2011-2013.

Informal advice for Archaeological Survey of India on landscape conservation policy,

2012.

Co-Organizer of National Academy of Environmental Design – National Research Council Disaster Roundtable Workshop on *Disasters-Resilient Design*, October 2010.

World Bank, India, peer review for Ganga River Basin, project concept note, 2010.

Esplanade 2020 Visioning Process. Landscape Committee. The Esplanade Association, Boston, MA, 2010-2013.

Workshop contributor to Art Libraries Society of North America: Postcards from the Edge, Landscape Architecture, hosted by Rotch Library, MIT, April 2010.

Advisor on the Aga Khan Garden project with AKTC, the University of Alberta Botanic Garden, and Nelson Byrd Woltz; Edmonton, Canada, 2009-present.

Reviewer, Aga Khan University-Arusha campus architecture and master planning, 2009.

External visiting committee. Program in Landscape Architecture, School of Natural Resources and Environment, University of Michigan, September 2006.

Landscape Architecture Foundation, Douglas Dockery Thomas Fellowship Selection Committee, 2005, 2006.

National Research Council, Water Science and Technology Board, Chair of Committee on Lower Great Lakes – St. Lawrence levels and flows review committee, 2005-6

Occasional advisor to Aga Khan Trust for Culture on garden conservation projects in Delhi, India, and Kabul, Afghanistan. 2002. [e.g., Humayan's tomb Mughal plant selection protocol; 2005 Baghe Babur central water axis conservation].

Design Competition Juror, *Ford-Calumet Environmental Center*, 2003-04. City of Chicago, State of Illinois, Ford Motor Company, and Chicago's Environmental Fund.

Design Competition Juror, *An Ideas Competition for a 21st-century Park: A Vision for the Extension of Lincoln Park*. Graham Foundation for Advanced Study in the Fine Arts, 2003-04.

Design Workshop Inc. Foundation, Advisory Board, 2002-05.

U.S. Bureau of Reclamation, Research Steering Committee, 2001, 2002.



National Research Council, Water Science and Technology Board. Chair of Committee to review the Grand Canyon Monitoring and Research Committee strategic planning, 1998-9.

National Research Council, Water Science and Technology Board. Committee on "The Future of Irrigation in the Face of Competing Demands," 1993-1995.

Proposal and Manuscript Reviews: **1992:** National Geographic Society, National Science Foundation (2), *Human Ecology, Irrigation and Drainage Systems*, Edward Arnold, and The University of Chicago Press, *Annals of the Association of American Geographers* (2); **1993:** *Annals of the Association of American Geographers* (1), *ECUMENE* (3), National Science Foundation (1), *Society and Space* (2), UK Economic and Social Research Council (1); *Economic Geography* (1); *Global Environmental Change* (1). **1994:** American Water Resources Association, Symposium Paper review (1); *Economic Geography* (1); National Science Foundation (1). *ECUMENE* (1); *Political Geography* (1); Software review [CYBERNET] for Haested Methods (1). **1995:** National Science Foundation (1); *Landscape Journal* (1); *Annals AAG* (1); *Professional Geographer* (1); Edward Arnold (1); *ECUMENE* (1); *Political Geography* (1). **1996:** *Philosophy and Geography* (1); *ECUMENE* (1); SSRC South Asia Predissertation Fellowship Panel. **1997:** Oxford University Press (2 mss.); **1998:** *Political Geography*; *ECUMENE*. **1999:** *ECUMENE*; British Archaeological Reports; *Journal of Historical Geography*; **2000:** Rosenberg International Forum; *Environmental Hazards* (1); National Research Council (1); **2001:** National Research Council (1); NCSA papers for Istanbul conference (3); *Society and Space* (1); *Philosophy and Geography* (1); *ECUMENE* (1); *Environment and Planning A* (1); **2002:** *Annals AAG* (1); *Cultural Geographies* (1). **2003:** UIUC Research Board peer review; UIUC College of Agriculture Research Board peer review (1); *Cultural Geographies* (1); National Research Council, Water Science and Technology Board (1); *Geographical Review* (1); **2004:** NRC Water Science and Technology Board (2); *Political Geography* (1); *Annals AAG* (1); UIUC Research Board (1); **2005:** University of Pennsylvania Press ms. Review (1); **2006:** NRC Water Science and Technology Board (2); **2007:** *Annals of the Association of American Geographers* (1); *Landscape Journal* (1); **2011:** National Science Foundation; **2012:** *Association of American Geographers* (1); *Geographical Review* (1); **2014:** *Geoforum* (1); Japan Foundation (1); *Journal of Political Ecology* (1); **2015:** *Bulletin of the School of Oriental and African Studies* (1); *Transactions of the Institute of British Geographers* (1); *Historical Methods* (1); *International Journal of Islamic Architecture* (1); **2016:** *Modern Asian Studies* (1); *Journal of the History of Gardens and Designed Landscapes* (1); **2018:** *Water Resources Research* (1); *Water Alternatives* (1); **2019:** *Professional Geographer*; **2020** PNAS; *Journal of the Pakistan Historical Society*; **2021** *Water History*; *Water Resources Research*; *Journal of the Pakistan Historical Society*; *Environment and Urbanization*; *Oxford Bibliographies*; *Disasters*; **2022** *Water Security*; *Muqarnas*; *Water*.

External Promotion, Tenure, and Distinguished Professorship Recommendations: **1993** (2); **1994** (3); **1996** (1); **1997** (1); **1998** (1); **1999** (1); **2000** (1); **2001** (2); **2002** (2); **2004** (3); **2005** (2); **2006** (2); **2007** (4); **2009** (3); **2010** (2); **2011** (3); **2012** (4); **2013** (5); **2014** (3); **2015** (2); **2016** (5); **2017** (9); **2018** (4); **2020** (4); **2021** (4); **2022** (3).

Editorial Boards:

*Water* (2021-present)

*LA! : Landscape Architecture* (India-present)

*International Journal for Islamic Architecture* (2014-present)

*New Geographies* (2013-present)

*Muqarnas: An Annual on the Visual Cultures of the Islamic World* (2010-present)

*ECUMENE: Environment, Culture and Meaning* (1992-2000) *Cultural Geographies* (editorial advisory board; 2001-2004) *Philosophy and Geography* (1995-8).

*Environmental Hazards* (1998-2001);

*Progress in Human Geography* (1998-2000).

*Journal of the History of Gardens and Designed Landscapes* (2004-2007)

*Environmental Design: Journal of the Islamic Environmental Design Research Centre* (1990-2000)

*Irrigation and Drainage Systems* (1986-9).

### **Professional Environmental Planning and Design Experience:**

*Environmental Planning and Landscape Architecture Consulting:*

World Bank, "Cleaning Iconic Sites in India," Ministry of Drinking Water and Sanitation, workshop and roadmap, 2016.

World Bank, "Inclusive Urban Heritage Revitalization Guidelines for Indian Cities," workshop, review, and writing, 2014.

World Bank, "Water, Climate and Food Security in the Indus Basin," study for Pakistan Water and Power Development Authority, 2010-2012.

Short-term consultancy with TortiGallas on the Aflaj Al Foah project in Al Ain, Abu Dhabi, 2009.

Short-term consultancy on AKU University Village land use plan with Goody Clancy, Boston, 2008.

World Commission on Dams, South Africa. Prepared report on ex-post evaluation of large dams and related water projects using internet search methods, 1999.

U.N. Food and Agriculture Organization, Investment Centre Division, Rome. 1996-97. 1) Organized workshop on "Incorporating environmental considerations in

project evaluation," 2) Prepared guide to "Obtaining environmental information on-line" (June 1997); and 3) Prepared report on "Transboundary water issues in the Ganges-Brahmaputra river basin."

Design Workshop, Inc., Denver, CO, 1992-5. Landscape Architects and Planners. Occasional short-term design reviews.

World Bank, Environment Department. "Integrating Global Biodiversity and Cultural Heritage Conservation in Asia," 1991-2.

World Bank, Urban Infrastructure. "Integrating Urban Shelter Planning with Cultural Heritage Conservation in Pakistan," 1990.

ISPAN (Irrigation Support Program for Asia and the Near East), 1991. USAID Regional Water Sector Strategy for Asia and the Near East--Strategy paper.

*SHEAFFER & ROLAND, INC., Chicago, IL; Landscape Architect/Environmental Planner, 1980-3.* Consultant on integrated land and water use site plan for a new town near Colorado Springs.

Project landscape architect on a watershed recreation project in Crystal Lake, IL. Conceptual design of recreation facilities in coordination with surface drainage and groundwater recharge processes.

Project landscape architect for "Garden Housing" project in Idlewild, Michigan. Responsible for siting 23 low-income rural rental housing units, roads, and services. Grading, drainage, planting, and handicapped access plans for earth-bermed housing. Follow-up project in Caseville, Michigan.

Landscape architect on project to upgrade the visual and functional character of sanitary landfill on Nantucket Island, MA. Responsible for phased design of landfill grading, drainage, and revegetation.

Landscape architect for wastewater reuse operations building in Vineland, NJ. Planting design for the operations building with plants native to the Pine Barrens.

*DELEUW, CATHER & CO., Chicago, IL; Landscape Architect/Environmental Planner, 1978-80.*

Landscape architect for preliminary design of Interstate 70 through Glenwood Canyon, Colorado. Landscape plans for revegetation, riverbank restoration, slope treatment, and a thirteen mile continuous creation trail. Co-direction a Canyon revegetation program that included vegetation sampling, revegetation design, test plot program, working drawings, and cost estimates.

Landscape architect for desert highway design projects in Kuwait and Abu Dhabi. Responsible for final planting design on the Transportation Center approach roads, Riyadh interchange, and Shaab Gate Plaza. Preliminary and final design of five highway interchanges in Abu Dhabi with desert species and coordination with trickle irrigation engineers.

COASTAL ENVIRONMENTS, INC., Baton Rouge, LA; Landscape Architect/Environmental Planner, 1976-78. Project manager for a handbook on environmental factors in coastal development in Louisiana; for the Louisiana State Planning Office. Principal author of a handbook for local governments on coastal zone management. Landscape planner for studies of wetlands management in St. Bernard Parish and sedimentation processes in Atchafalaya Bay, Louisiana.

*Site Planning and Landscape Design:*

Site Planning, Storybook Farm, Chatham County, North Carolina, 2021 with Florrie Wescoat.

Residential garden design with Florrie Wescoat, Garden Designer; two projects in 1995; four projects in 1996; two projects in 1997; two projects in 1998; two projects in 1999; four projects in 2000; two projects in 2001; two projects in 2004; two projects in 2006; two projects in 2007; one project in 2008; one project in 2009; one in 2010; one in 2012; one in 2013; one in 2014, one in 2015, one in 2016, one in 2017, one in 2018.

Memorial Sculpture Garden, Boulder Police Department, Design Competition, 2000. Designed with Florrie and Ruth Wescoat. Built and dedicated May 2001.

Robie House Committee, University of Chicago, 1985-6. Planting alternatives for the entry to Frank Lloyd Wright's Robie House.

**Professional Memberships** (various dates):

American Council for South Asian Art  
American Society of Landscape Architects  
Association of American Geographers  
American Water Resources Association  
American Water Works Association  
Friends Association for Higher Education  
Historians of Islamic Art and Architecture  
International Water History Association  
International Water Resources Association

**Professional License:** Landscape Architect (CLARB)--Louisiana, no. 223 (not in force)

## Foreign Field Study and Travel:

### *South Asia:*

#### India:

MIT-Tata Center rural water planning research, Maharashtra, July-August 2015, 2016, 2017, 2018, 2019; January 2016, 2017, 2018, 2019, 2020.

MIT-Aga Khan Agency for Habitat design workshops in Gujarat, August 2017, January 2018; Aga Khan Trust for Culture Conservation+Development seminar, Delhi, August 2018; Workshops in Agra and Mumbai, October 2014.

MIT-Tata Fellowship field research, Mumbai and Gujarat, July-August, 2014.

India: AKPIA-AKPBS, I Community Waterscapes Workshop, January 2014.

MIT-Tata Fellowship field research, Mumbai and Gujarat, July-August 2013.

Mumbai Design for Social Change workshop, December 2012

Madhya Pradesh site visits, August 2012

Delhi field work, site visits in Punjab and Gujarat, January 2012

Delhi conference and field work, October 2011

Site visits to Pune, Varanasi, Mumbai, and Delhi, February 2011

Nizamuddin landscape heritage conservation workshop, and IIHS workshop, Bangalore, January 2009; and January 2010 (graduate student-faculty field trip with AKTC).

Delhi, Rajasthan, Kashmir landscape and water research, July 2009.

Nizamuddin landscape heritage conservation workshop, January 2009 (graduate student-faculty field trip with AKTC).

Mughal landscape and water systems field work, August 2008. Nagaur, Rajasthan, Garden Conservation Workshop (co-organizer with the Mehrangarh Museum Trust), January 2006, January 2007.

Champaner-Pavagadh, Gujarat, January 2003, January 2005.

Taj Mahal landscape conservation project. September 2001, September 2002.

Nagaur Gardens and Waterworks meetings, Rajasthan, India. Sponsored by the ARCH Foundation, March 2001.

Smithsonian Foreign Currency Program, Mehtab Bagh (Moonlight Garden) Project, Agra, October 1999 and June 1998.

Mughal Gardens Project site visit, Agra, September 1987.

Williams College Semester in India Program, August 1971-January 1972.

Pakistan: Lahore University of Management Sciences, School of Science and Engineering, and Water Informatics and Technology Center, research and advisory board meetings, January 2013, 2015, 2016, 2017, 2018, 2019, 2020.

Aga Khan University, Faculty of Arts and Sciences Advisory Board, 2022.

Multiple projects with the World Bank, University of Engineering & Technology; and cultural landscape heritage research and presentations in Punjab and Gilgit: October 2009, and March 2010, July 2010, January 2011, January 2013.

Smithsonian Institution “Mughal Gardens Project,” and USEPA, “Climate Impact Assessment.” Multiple visits per year 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995.

Bangladesh. Dhaka. “Conference on Social Science and Immunization.” Center for Development Management, Rajendrapur. Sponsored by the Royal Tropical Institute (Netherlands). August 1995.

Sri Lanka: American Field Service (AFS) scholarship to Sri Lanka, 1969.

***Central Asia:***

Uzbekistan. Social Science Research Council. Aral Sea Conference, Tashkent to Samarqand and Bukhara, May 1998.

Turkmenistan. US-USSR Bilateral Environmental Research Program (NCAR sponsored). Colorado-Amu Darya Research Project, Ashkabad to Nukus, 1992.

Tajikistan. Aga Khan Agency for Habitat, Village planning workshop, July 2019.

***Mediterranean and Middle East:***

Iran: Tehran, Qazvin, Tabriz, Isfahan, June 2015

Portugal, Lisbon, Aga Khan Award for Architecture, September 2013; 2022

Turkey, Istanbul. Disaster risk management workshop, 2012.

Jerusalem, Van Leer Institute and Hannover Leibniz University, 2011.

Doha, Qatar, Aga Khan Award for Architecture. November 2010.

Abu Dhabi, Aflaj Al Foah project, Al Ain. September 2009.

Jordan. Petra Pool and Garden Archaeology Project. July 2003.

Spain, Morocco, and Turkey. Islamic gardens and waterworks. Summer 2001.

Italy. American Academy in Rome. Brief travel to Sicily and Tunisia, 1996-97.

***East Asia:***

Singapore, Blue-Green Urban Infrastructure workshop, February 2015.

China, Beijing and Xi'an landscape workshops, November 2014.

Japan, Tokyo and Kyoto landscape and garden study, March 2013.

Japan, Minami Sanriku workshop, July 2012.

Singapore International Water Week, 2012.

Japan, Minami Sanriku, Kyoto, and Tane workshop, July 2011.

**Lectures (1984-2022; years of recent talks indicated):**

Agnes Scott College

Aga Khan Foundation, Paris, 2009, 2020

Aga Khan Planning and Building Services-India, 2012, 2014

Aga Khan Planning and Building Services-Pakistan

Aga Khan Trust for Culture, Geneva, 2009

Aga Khan Trust for Culture, New Delhi, 2018

Aga Khan University Medical College, Karachi, 2009, 2021

Aligarh Muslim University, 2014

American Academy in Rome (multiple)

American Association for the Advancement of Science, 2013

American Institute of Architects, DC, 2019.

American Society of Landscape Architects (annual meetings, multiple 2013).

Archaeological Survey of India – New Delhi (multiple, 2013)  
 Architectural League of New York, 2015  
 Aridlands Institute, Acequias conference, Dixon, NM, 2012  
 Asian Civilizations Museum, Singapore, 2012  
 Aspen Institute  
 Association of American Geographers, multiple, 2018  
 Auro University, Surat, 2018  
 Bari University, Italy  
 Bath SPA University, U.K., 2022  
 Beijing Forestry University, Urban Ecology, 2017  
 Beijing Forum, Peking University, 2014  
 Boston Museum of Fine Arts, 2016  
 Boston Society of Architects, 2018, 2021  
 Bowdoin College  
 Brown University, 2009  
 Carnegie Mellon University  
 Catholic University of America  
 Centre for Research in Rural and Industrial Development, Chandigarh, 2012  
 Charles River Watershed Association, 2012, 2016  
 Clark University, School of Geography (multiple), 2012, 2017, upcoming 2021  
 Colby College, 2015  
 College Art Association, multiple, 2019  
 Colorado Water Workshop, Gunnison, CO  
 Columbia University, multiple, 2019  
 Council of Educators in Landscape Architecture (multiple)  
 DR BNCA College, Pune, India, 2011, 2016  
 Duke University  
 Dumbarton Oaks, Washington, DC (multiple)  
 Emory University, Michael C. Carlos Museum, 2021  
 Friends Association for Higher Education (multiple), 2011  
 Harvard University, Graduate School of Design (multiple), 2018  
 Harvard South Asia Water Initiative, 2011  
 Harvard Aga Khan Program for Islamic Architecture, 2011  
 Harvard University, Kennedy School of Government, Carr Center for Human Rights, 2012; Radcliffe Institute seminar on Human Right to Water and Sanitation, 2012; Center for Middle Eastern Studies Water workshop keynote, 2013; Drought conference HKS, 2013; Aga Khan Program for Islamic Architecture, 2014; South Asia Institute water forum, 2014; Urban design program, 2014.  
 Illinois Institute of Technology, Architecture  
 Illinois State Water Survey  
 Indian Council for World Affairs, 2012  
 India Habitat Centre, 2014, 2018  
 Indian Institute for Human Settlements, Bangalore 2010.  
 Indian Institute of Science Education and Research, Pune, 2021  
 Indian Institute of Technology-Bombay, multiple, 2014, 2017, 2018

Indian Institute of Technology-Roorkee, 2016  
 Indian International Centre, New Delhi (multiple)  
 Indian National Trust for Art and Cultural Heritage – Delhi, 2011  
 Indian National Trust for Art and Cultural Heritage – J & K, Srinagar, 2009  
 Indian National Trust for Art and Cultural Heritage, UK  
 Indian Society of Landscape Architects, Annual keynote, Bhopal, 2012  
 Institute of Architects, Karachi chapter, 2010  
 Institute of Architects, Lahore chapter  
 Institute of Town Planners, India, Future of Cities keynote, 2017  
 International Institute for Applied Systems Analysis, 2018  
 International Joint Commission, Science Advisory Board (Canada-USA)  
 Isabella Stewart Gardener Museum, Boston, 2009  
 Isfahan Regional Water Department, 2015  
 Johns Hopkins University, Geography and Environmental Engineering  
 Johns Hopkins, SAIS, 2011  
 Kings College, London, 2018  
 Lahore Museum  
 Lake Forest College  
 Louisiana State University  
 Lahore University of Management Sciences (LUMS), multiple 2015, 2016, 2017, 2021 (Centre for Water Informatics and technology)\*  
 Massachusetts Institute of Technology (multiple AKPIA, EPP, ACT, ERC, MITEI), 2011; 2012; MIT-India conference showcase, 2012; Tata Center for Technology and Design 2013, 2014, 2015, 2016, 2017); Campus Sustainability Connect 2015; DUSP Urban Resilience panel, 2015; MIT-Tata seminar on policy innovation, 2015, 2016; DUSP Displacement Research Action Network, 2016. MIT Water Summit, 2016. Humanitarian design panel, 2018. Housing Plus Conference, 2018. Climate and humanities conference moderator, 2018. MIT Water Summit, 2018; MIT Water Club, 2021  
 MIT Club of Washington, DC water series, 2012  
 MIT Museum and Cambridge Science Fair, Rivers of Ice, 2012, 2013  
 MIT Water Club, May 2015, 2018  
 Metropolitan Museum of Art, Annemarie Schimmel Memorial Lecture, 2011  
 Museum of Fine Arts, Boston, 2016  
 National Academy of Environmental Design, Washington DC 2010  
 National Academy of Sciences, Disasters Roundtable, 2010  
 National College of Arts – Lahore, Pakistan (multiple), 2011  
 National Institute for Urban Affairs-New Delhi, 2021\*  
 National Research Council, Water Science and Technology Board  
 National University of Science and Technology, Pakistan, 2015  
 Nehru Memorial Museum-New Delhi, 2014  
 Nizamuddin East Colony Association, New Delhi, 2010  
 Northwestern University  
 Oklahoma State University



Palladium Musicum, Greenwich, CT, 2018  
 Pakistan Institute for Policy Research, 2020  
 Partners for Livable Communities, Washington DC (Bridge Builders Award)  
 Poornima University, Jaipur, Rajasthan, 2022  
 Radcliffe Institute, 2012  
 Rhode Island School of Design (multiple)  
 Rutgers University (multiple), 2009  
 Sackler Museum, Cambridge, MA, Zucker Lecture, 2011  
 School of Planning and Architecture, New Delhi, India  
 Seattle Asian Art Museum, SACHI, 2010  
 Smith College, Landscape Studies program, 2015, 2016  
 Smithsonian Institution, Freer and Sackler Galleries of Asian Art (multiple)  
 Stetson University  
 Stimson Center, Fresh Water Futures Workshop, 2009  
 Syracuse University  
 Tabriz University, 2015  
 Tabriz Municipality, 2015  
 Tata Institute of Social Sciences, 2016  
 Tehran Urban Sustainability Forum, 2015  
 Tokyo University (Todai), 2013  
 Tufts University and MIT, Water Diplomacy program, 2011  
 UCLA, School of Architecture and Planning  
 UCLA, Department of Geography  
 U.N. Food and Agriculture Organization U.S. Education Foundation—Pakistan  
 University of Alberta, 2013  
 University of Bath, UK, 2022  
 University of California—Berkeley, Department of Landscape Architecture  
 University of California—California Water Colloquium  
 University of California—Merced, 2017  
 University of Chicago (multiple)  
 University of Colorado, Boulder (multiple), Natural Hazards Center, 2011  
 University of Colorado, Denver  
 University of Colorado Art Gallery  
 University of Engineering & Technology-Lahore, Pakistan, 2010, 2011, 2015  
 University of Florida  
 University of Hannover, Germany  
 University of Idaho  
 University of Illinois at Chicago  
 University of Illinois at Urbana-Champaign (multiple, 2013)  
 University of Iowa  
 University of Lisboa, 2022  
 University of London, School of Oriental and African Studies, 2011  
 University of Minnesota, multiple.  
 University of Missouri  
 University of Oklahoma (multiple), 2016

University of Pennsylvania (multiple), 2009; 2012; 2018  
University of Tennessee  
University of Toronto, Out-of-Water Conference, 2011  
University of Wyoming  
University YMCA – Champaign, IL  
Van Leer Jerusalem Institute, Landscape and Environmental Policy, 2011  
Vanderbilt University, 2012  
Vermont Law School  
Washington and Jefferson College  
West Virginia University  
Williams College  
Woodrow Wilson International Center for Scholars, Washington, DC  
World Bank, Washington, DC, multiple, 2018  
World Bank, New Delhi, India, 2017  
World Economic Forum, Davos, “Water-Energy Nexus,” 2011  
Xi’an University of Architecture and Technology, 2014  
Yale University, Agrarian Studies Program  
Yale University, School of Forestry and Environmental Studies, 2019.

