

ROBERT G. VARADY
Curriculum Vitae
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Residence

6810 N. Montezuma
Tucson, AZ 85718
(520) 299-5137
Email: rvarady@email.arizona.edu

Work

Udall Center for Studies in Public Policy, The University of Arizona
803 East First Street, Tucson, AZ 85719
Phone: (520) 626-4393, Fax: (520) 626-3664
Web: <http://udallcenter.arizona.edu/people/staff/robert-g-varady>

PERSONAL

Born in Budapest, Hungary, Lived in Paris, France, ages 4 to 9. U.S. citizen since 1957. Married since 1970, daughter born in 1973.

EDUCATION

Ph.D. Modern History. University of Arizona. 1981.

Dept. of Oriental Studies (now Middle Eastern & N. African Studies). Dissertation: *Rail and Road Transport in 19th Century Awadh: Competition in a North Indian Province*. British colonial administration & policy, and railways' impacts on environment, health, agriculture, marketing, transport. 313 pp. Advisor: R. M. Eaton.

M.S. Mathematics. Polytechnic Institute of Brooklyn (now NYU Tandon School of Engineering). 1966.

Dept. of Mathematics. Major: pure mathematics, minor: statistics. Thesis: *Statistical Point Estimation*.

Review of theorems on parametric and nonparametric point estimation. 77 pp. Advisor: Andrew J. Terzuoli.

B.S. Mathematics. City College of New York (CCNY), branch of City University of NY (CUNY). 1965.

Dept. of Mathematics. Major: mathematics, minor: natural sciences.

ACADEMIC APPOINTMENTS AND EMPLOYMENT

Academic Appointments (at University of Arizona)

- *Research (Full) Professor of Environmental Policy* (2002-), Udall Center for Studies in Public Policy (promoted from Associate Professor), Associate Research Professor (1996-2002, promoted from Asst. Professor, with continuing status [nonteaching tenure]), Asst. Research Professor (1989-96)
- *Adjunct Research (Full) Professor of Arid Lands Studies* (2002-), Associate Research Professor (1996-2002), Assistant Research Professor (1989-96)
- *Adjunct (Full) Professor of Hydrology & Atmospheric Sciences* (2002-), *Adjunct Assoc. Professor* (2000-02)
- *Assistant Research Scientist* (Jan. 1984-June 1990), *Research Associate* (Jan. 1981-1984), Office of Arid Lands Studies, College of Agriculture and Life Sciences
- *Teaching Assistant* (1976-77), Department of Oriental Studies

Administrative Appointments (at University of Arizona)

Udall Center for Studies in Public Policy

- *Director* (July 2016-Mar. 2017), *Interim Director* (Jan. 2016- July 2016)
- *Deputy Director* and *Director of Environmental Programs* (July 1998-Mar. 2017)
- *Interim Dir.* (July 1996-June 1998), *Actg. Dir.* (2014, 2007-08, 1992-93), *Assoc. Dir.* (1989-June 1996)

French National Science Research Center (CNRS), Joint International Unit on Water, Environment and Policy (UMI 3157)

- *Director* (from Apr. 2008 to Feb. 2011)

Office of Arid Lands Studies, College of Agriculture and Life Sciences

- *Director*, \$3.1 million, 5-year Mauritania Agricultural Research II Project (May 1988-July 1990)
- *Manager*, Arid Lands Information Center (Feb. 1988-June 1989)

Other Positions

Central Arizona College -- Pima College -- Chapman College

- 1979-1983. *Adjunct Assistant Professor*, Departments of History and Mathematics

Dowling College, Oakdale, New York

- 1971-1973. *Lecturer*, Department of Mathematics

Airborne Instruments Laboratory, Division of Cutler-Hammer, Farmingdale, New York

- 1966-1971. *Mathematician*, Transportation Research Department

MAJOR FIELDS OF INTEREST

- Global and transboundary groundwater governance
- Global water initiatives
- Environment, natural-resources, climate, water security, and water-management policy
- U.S.-Mexico border environment, comparative border environmental policy
- History of water, environment, natural-resources, agriculture, infrastructure
- Public participation, information flows, and environmental conflict resolution
- Environment and development in Mexico, West Africa, South Asia, Middle East

PUBLICATIONS**Books / Monographs / Digests / Edited Volumes / Journal Special Issues**

Garfin, G., P. Romero-Lankao, and R. G. Varady, eds. 2013. Special issue (Vol. 26) *Environmental Science and Policy*, “Rethinking Integrated Assessments and Management Projects in the Americas.” 112 pp.

Megdal, S. B., R. G. Varady, and S. Eden, eds. 2013. *Shared Borders, Shared Waters: Israeli-Palestinian and Colorado River Basin Water Challenges*. Leiden: CRC Press/Balkema – Taylor & Francis Group in cooperation with UNESCO-IHE. 320 + xxii pp.

Wilder, M., C. A. Scott, N. Pineda-Pablos, R. G. Varady, and G. M. Garfin, eds. 2012. *Moving Forward from Vulnerability to Adaptation: Climate Change, Drought, and Water Demand in the Urbanizing Southwestern United States and Northern Mexico*. Tucson: Udall Center for Studies in Public Policy. 170 pp. English and Spanish.

Lopez-Hoffman, L., E. McGovern, R. G. Varady, and K. W. Flessa, eds. 2009 (appeared Jan. 2010). *Conservation of Shared Environments: Learning from the United States and Mexico*. Univ. of Arizona Press, The Edge: Environmental Science, Law and Policy Series, eds., M. Miller, J. Overpeck, B. Morehouse. 320 + xiv pp.

Varady, R. G., A. Kaus, R. Merideth, and K. Hankins. 2003. . . . *to the Sea of Cortés: Nature, Water, Culture, and Livelihood in the Lower Colorado River Basin and Delta—A Digest*. Tucson: Udall Center for Studies in Public Policy, Univ. of Arizona. 40 pp.

Liverman, D. M., R. G. Varady, O. Chávez, and R. Sánchez. 2002. *Temas ambientales a lo largo de la frontera entre Estados Unidos y México: impulsores de cambio y respuestas de ciudadanos e instituciones*. Mexico City: El Colegio de México, Centro de Estudios Demográficos y de Desarrollo Urbano, Programa de Estudios Avanzados en Desarrollo Sustentable y Medio Ambiente (LEAD-México). Monograph adaptation and translation of article published in *Annual Review of Energy and the Environment* [1999], see below). 87 pp.

Varady, R. G., ed. 1992. *Preserving Arizona's Environmental Heritage*. 59th Arizona Town Hall Research Report. Phoenix: Arizona Town Hall. 252 + xxxiii pp.

Varady, R. G., ed. 1992. *The U.S.-Mexico Border Region Under Stress: A Binational Symposium on Ideas for Future Research*. Proceedings of Oct. 1991 symposium sponsored by Ford Foundation in Guaymas, Mexico. Tucson: Udall Center for Studies in Public Policy. 50 + vii pp.

Whitehead, E. E., C. F. Hutchinson, B. N. Timmermann, and R. G. Varady, eds. 1988. *Arid Lands Today and Tomorrow: Proceedings of an International Research and Development Conference*. Boulder: Westview Press. 1435 + xxiii pp.

Hutchinson, B. S., and R. G. Varady, eds. 1988. *Arid Lands Research Institutions: A World Directory*. 3d ed. N.Y.: Allerton Press. 290 + vi pp.

Refereed Journal Articles

Scott, C. A., T. Albrecht, R. de Grenade, R. G. Varady, A. Zuniga Teran, B. Thapa. In review. Water security and the pursuit of food, energy, and earth system resilience. *Water International*.

PUBLICATIONS / Refereed Journal Articles (cont.)

- Albrecht, T., R. G. Varady, A. A. Zuniga, A. K. Gerlak, and C. Staddon. Securing a shared hidden resource: Governance mechanisms for transboundary groundwater security. In review. *Water Security*.
- Gerlak, A. K., L. House-Peters, R. G. Varady, T. Albrecht, A. Zúñiga-Terán, C. A. Scott, R. R. de Grenade, and C. Cook. In review. Water security: A critical review of place-based studies. *Global Environmental Change*.
- Megdal, S. B., A. Gerlak, L.-Y., Huang, N. Delano, R. G. Varady, J. Petersen-Perlman. 2017. Innovative approaches to collaborative groundwater governance in the United States: Case studies from three high-growth regions in the Sun Belt. *Journal of Environmental Management* 59, 5: 718-735. DOI:10.1007/s00267-017-0830-7.
- Garfin, G., C. A. Scott, M. Wilder, R. G. Varady, and R. Merideth. 2016. Metrics for assessing adaptive capacity and water security: Common challenges, diverging contexts, emerging consensus. Special issue, "Environmental Change and Assessment," ed. by G. Garfin, M. Wilder, and R. Merideth. *Current Opinion in Environ. Sustainability (COSUST)* 21: 86-89. <http://dx.doi.org/10.1016/j.cosust.2016.11.007>.
- Varady, R. G., A. Zúñiga-Teran, G. Garfin, F. Martín, and S. Vicuña. 2016. Adaptive management and water security in a global context: Definitions, concepts, and examples. *COSUST* 21: 70-77.
- de Grenade, R., J. Rudow, R. Taboada Hermoza, M. E. Aduato Aguirre, C. A. Scott, B. Willems, J. Schultz, and R. G. Varady. 2016. Anticipatory capacity, food security and global change across an extreme elevation gradient in the Ica Basin, Peru. *Regional Environmental Change* 16,7: 1-14. DOI: 10.1007/s10113-016-1075-3.
- Lemos, M. C., D. Manuel-Navarrete, B. Willems, R. Diaz Caravantes, and R. G. Varady. 2016. Advancing metrics: Models for understanding adaptive capacity & water security. *COSUST* 21: 52-57.
- Thapa, B., C. A. Scott, P. Wester, and R. G. Varady. 2016. Towards characterizing adaptive capacity: the case of farmer-managed irrigation systems in Nepal. *COSUST* 21: 37-44.
- Varady, R. G., A. A. Zuniga-Teran, A. K. Gerlak, and S. B. Megdal. 2016. Modes, approaches, and lessons learned: A survey of selected cases of groundwater governance across the globe. In special issue, "Water Governance, Stakeholder Engagement, and Sustainable Water Resources Management," ed. by S. Megdal, S. Eden, and E. Shamir. *Water* 8, 417: 1-24. <http://www.mdpi.com/2073-4441/8/10/417/html>, doi:10.3390/w8100417.
- Ocampo-Melgar, A., S. Vicuña, J. Gironás-León, R. G. Varady, and C. A. Scott. 2016. Scientists, policymakers, and stakeholders plan for climate change: A promising approach in Chile's Maipo basin. *Environment: Science and Policy for Sustainable Development* 58, 5 (Sept.-Oct.): 24-37.
- Wilder, M. O., I. Aguilar-Barajas, N. Pineda-Pablos, R. G. Varady, S. M. Megdal, J. McEvoy, R. Merideth, A. A. Zúñiga-Terán, and C. A. Scott. 2016. Desalination and water security in the US–Mexico border region: assessing the social, environmental and political impacts. *Water International* 41, 5: 756-75. <http://dx.doi.org/10.1080/02508060.2016.1166416>. (2016 *Honorable mention, best paper award, International Water Resources Assoc.*)
- Sugg, Z., R. G. Varady, A. K. Gerlak, and R. de Grenade. 2015. Transboundary groundwater governance in the Guarani Aquifer System: Reflections from a survey of global and regional experts. *Water International* 40, 3: 377–400.
- Megdal, S. B., A. K. Gerlak, R. G. Varady, and L.-Y. Huang. 2015. Groundwater governance in the United States: Common priorities and challenges. *Groundwater* 52, 1: 677-84.
- Scott, C. A., F. J. Meza, R. G. Varady, H. Tiessen, J. McEvoy, G. M. Garfin, L. M. Farfán, M. Wilder, N. Pineda Pablos. 2013. Water security and adaptive management in the arid Americas. *Annals of the Assoc. of Amer. Geographers* 103, 2: 280-289. <http://dx.doi.org/10.1080/00045608.2013.754660>.

PUBLICATIONS / Refereed Journal Articles (cont.)

- Varady, R. G., C. A. Scott, M. Wilder, B. Morehouse, N. Pineda, and G. M. Garfin. 2013. Transboundary adaptive management to reduce climate-change vulnerability in the Western U.S.-Mexico border region. Special issue, "Rethinking Integrated Assessments and Management Projects in the Americas," *Environmental Science and Policy* 26 (Feb.): 102–112, ed. by G. Garfin, P. Romero-Lankao, and R. G. Varady. Online <http://dx.doi.org/10.1016/j.envsci.2012.07.006>.
- Garfin, G. M., P. Romero-Lankao, R. G. Varady. 2013. Editorial: Rethinking integrated assessments and management projects in the Americas. Special issue of *Environmental Science and Policy* 26 (Feb.): 1-5, ed. by G. Garfin, P. Romero-Lankao, and R. G. Varady. <http://dx.doi.org/10.1016/j.envsci.2011.12.010>.
- Scott, C. A., R. G. Varady, F. Meza, E. Montaña, G. B. de Raga, B. Luckman, C. Martius. 2012. Science-policy dialogues for water security: Addressing vulnerability and adaptation to global change in the Arid Americas. *Environment: Science and Policy for Sustainable Devel.* (May-June 2012) 54, 3: 30-42.
- Gerlak, A., R. G. Varady, O. Petit, and A. Haverland. 2011. Hydrosolidarity and beyond: Can ethics and equity find a place in today's water resource management? *Water International* 36, 3 (May): 251–265. (2013 Honorable mention, best paper award, Routledge Pub. and International Water Resources Assoc.)
- Wilder, M., C. A. Scott, N. Pineda Pablos, R. G. Varady, G. M. Garfin, and J. McEvoy. 2010. Adapting across boundaries: Climate change, social learning, and resilience in the U.S.-Mexico border region. *Annals of the Association of American Geographers* (special issue on climate change) 100, 4: 917-28.
- López-Hoffman, L., R. G. Varady, K. W. Flessa, and P. Balvanera. 2010. Transboundary ecosystem services on the México-U.S. border: Policy options for shared services. *Frontiers in Ecology and the Environment* 8, 2: 84-91 (online version March 2009).
- Gerlak, A., R. G. Varady, and A. Haverland. 2009. Hydrosolidarity and international water conflict. *International Negotiation* 14, 2: 311-328. Special issue, "Negotiating International River Disputes to Avert Conflict & Facilitate Cooperation," ed. by A. Gerlak and N. Zawahari.
- Varady, R.G., K. Meehan, and E. McGovern. 2009. Charting the emergence of global water initiatives in world water governance. Special issue, *Physics and Chemistry of the Earth*, 34, 3:150-155, guest editors. M. Melosi and M. Ertsen.
- Morehouse, B. J., D. Ferguson, G. Owen, A. Browning-Aiken, P. Wong-Gonzales, N. Pineda, and R. G. Varady. 2008. Science and socio-ecological sustainability: Examples from the Arizona-Sonora border. *Environmental Science and Policy* 11, 3: 272-84.
- Varady, R. G., K. Meehan, J. Rodda, E. McGovern, and M. Iles-Shih. 2008. Strengthening Global Water Initiatives. *Environment* 50, 2 (Mar.-Apr.): 18-31.
- Browning-Aiken, A., B. Morehouse, A. Davis, M. Wilder, R. Varady, D. Goodrich, R. Carter, D. Moreno, E. Dellinger McGovern. 2007. Climate, water management, and policy in the San Pedro basin: results of a survey of Mexican stakeholders near the U.S.-Mexico border. *Climatic Change* 85, 3-4 (Dec.): 323-341.
- Rosenberg, N. J., V. M. Mehta, J. R. Olsen, H. von Storch, R. G. Varady, M. J. Hayes, and D. Wilhite. 2007. Societal adaptation to decadal climate variability in the United States. CRCES Workshop on Adaptation to Decadal Climate Variability in the United States, 26-28 Apr. 2007, Waikoloa, Hawaii. *Eos* 88, 43: 444.
- Ray, A. J., G. M. Garfin, L. Brito-Castillo, M. Cortez-Vázquez, H. F. Diaz, J. Garatuza-Payán, D. Gochis, R. Lobato-Sánchez, R. G. Varady, C. Watts. 2007. Monsoon region climate applications: Integrating climate science with regional planning and policy. *Bulletin of the American Meteorological Society* 88, 6 (June): 933-35.
- Varady, R.G., and K. Meehan. 2006. A flood of institutions? Sustaining global water initiatives. *Water Resources Impact* 8, 6: 19-22.

PUBLICATIONS / Refereed Journal Articles (cont.)

- Browning-Aiken, A., H. Richter, D. Goodrich, B. Strain, and R. G. Varady. 2004. Upper San Pedro Basin: fostering collaborative binational watershed management. Special issue of *International Journal of Water Resources Development* 20(3): 353-367. ed. by L. Andersson and D. W. Moody.
- Browning-Aiken, A., R. G. Varady, and D. Moreno. 2004. Water-resources management in the San Pedro Basin: Building binational alliances. *Journal of the Southwest* 45, 4: 611-627.
- Lemos, M. C., D. Austin, R. Merideth, and R. G. Varady. 2002. Public-private partnerships as catalysts for community-based water infrastructure development: the Border WaterWorks program in Texas and New Mexico colonias. *Environment and Planning C: Government and Policy* 20:281-295.
- Varady, R. G., P. Romero Lankao, and K. Hankins. 2001. Managing hazardous materials along the U.S.-Mexico Border. *Environment* 43, 10 (Dec.): 22-36.
- Varady, R. G., K. Hankins, A. Kaus, E. Young, and R. Merideth. 2001. Nature, water, culture, and livelihood in the Lower Colorado River basin and Delta: an overview of issues, policies, and approaches to environmental restoration. *Journal of Arid Environments* 49, 1 (Sept.): 195-209. The Lower Colorado River Basin and Delta (Special Issue), ed. by E. P. Glenn, D. Radtke, B. Shaw, and A. Huete. Also Udall Center Working Paper. Tucson: Udall Center. 21 pp.
- Varady, R. G., M. A. Moote, and R. Merideth. 2000. Water allocation options for the Upper San Pedro basin: assessing the social and institutional landscape. *Natural Resources Journal* 40, 2 (Spring 2000): 223-235. Issue on Transboundary Groundwater Management on the U.S.-Mexico Border, ed. by S. Mumme.
- Varady, R. G., Arnold, R. G., D. Carter, R. Guzman, and C. Peña. 2000. Hazardous waste and the U.S.-Mexico Border region: planning an international center. *Environmental Practice* 2, 1 (Mar. 2000): 38-44. Also Udall Center Working Paper. Tucson: Udall Center. 17 pp.
- Liverman, D., R. G. Varady, O. Chávez, and R. Sánchez. 1999. Environmental issues along the U.S.-Mexico border—drivers of change and responses of citizens and institutions. *Annual Review of Energy and the Environment* 24: 607-643 (energy.annualreviews.org/cgi/content/full/24/1/607?ijkey=Q_Ymtm_xujXDofU&keytype=ref&siteid=arjournals). Also, Udall Center Pub. Working Paper 99-2. 34 pp.
- Milich, L., and R. G. Varady. 1999. Openness, sustainability, and public participation: new designs for transboundary river-basin institutions. *Journal of Environment and Development* 8, 3:258-306. Also, Udall Center Publications Working Paper 99-8. 49 pp.
- Varady, R. G. 1999. The Ford Foundation-sponsored symposium series on U.S.-Mexico border environmental policy: a brief perspective, 1991-2000. *Natural Resources Journal* 39, 1:189-91.
- Milich, L., and R. G. Varady. 1998. Managing transboundary resources: lessons from river-basin accords. *Environment* (Oct. 1998) 40, 8:10-15, 35-41.
- Carter, D. E., C. Peña, R. G. Varady, and W. Suk. 1996. Health and hazardous waste issues related to the U.S.-Mexico border. *Environmental Health Perspectives* 104, 6 (Jun. 1996): 590-594 ([ehpnet1.niehs.nih.gov/docs/1996/104\(6\)/carter.html](http://ehpnet1.niehs.nih.gov/docs/1996/104(6)/carter.html)).
- Varady, R. G., and M. D. Mack. 1995. Transboundary water resources and public health in the U.S.-Mexico border region. *Journal of Environmental Health* 57, 8 (Apr. 1995): 8-14.
- Varady, R. G., D. Colnic, R. Merideth, and T. Sprouse. 1996. The U.S.-Mexico Border Environment Cooperation Commission: collected perspectives on the first two years. *Journal of Borderlands Studies* (Fall) 11, 2:89-119.
- Varady, R. G., H. Ingram, and L. Milich. 1995. The Sonoran Pimería Alta: shared environmental problems and challenges. *Journal of the Southwest* 37, 1 (Spring 1995):102-122 (www.udallcenter.arizona.edu/programs/usmex/publications/jswpima_doc.html).

Ingram, H., L. Milich, and R. G. Varady. 1994. Managing transboundary resources: lessons from Ambos Nogales. *Environment* 36, 4 (May 1994): 6-9, 28-38.

PUBLICATIONS / Refereed Journal Articles (cont.)

Hutchinson, B. S., R. G. Varady, and C. M. Baldwin. 1991. Information management projects in developing countries: the challenge of working with varying levels of infrastructure. Conference Issue, *Quarterly Bulletin of the International Association of Agricultural Information Specialists* 36, 1-2:110-113. Proceedings of the VIIIth World Congress of the International Association of Agriculture Librarians and Documentalists (IAALD): "Information and the End-User." Budapest, Hungary. 28-30 May 1990.

Baldwin, C. M., and R. G. Varady. 1989. Information access in Niger: development of a West African special library. *Special Libraries* (Winter 1989) 80, 1:31-38.

Varady, R. G. 1983. Imperial teamsters to motorized cattle dealers: observations on the history of Banjaras or Indian Gypsies. *Journal of the Gypsy Lore Society*, 4th ser., 2, 1:53-62.

Varady, R. G. 1979. North Indian Banjaras: their evolution as transporters. *South Asia: Journal of Asian Studies* 2, 1-2:1-18.

Varady, R. G. 1978. The diary of a road: a sequential narration of the origins of the Lucknow-Kanpur Road (1825-1856). *The Indian Economic and Social History Review* 15, 2:151-72.

Varady, R. G. 1977. A social history of road transport in North India before 1800. *Selected Papers in Asian Studies* 2:123-38.

Abramson, P., and R. G. Varady. 1971. Blockage of signs by trucks. *Traffic Engineering* 41(7):18-26 (authorship acknowledged in vol. 41, no. 8.).

Book Chapters

Megdal, S. B., A. Zuniga Teran, R. G. Varady, N. Delano, A. K. Gerlak, and E. T. Vimont. In Press. Groundwater governance in the United States: A mosaic of priorities and approaches. In *Advances in Groundwater Governance*, ed. by K. Villholth, E. Lopez-Gunn, J. van Der Gun, K. Conti, and A. Garrido. Delft: CRC Balkema.

de Chaisemartin, M., R. G. Varady, S. B. Megdal, K. Conti, J. van der Gun, A. Merla, G.-J. Nijsten, and F. Scheibler. 2016. Addressing the groundwater governance challenge—A call from the "Groundwater Governance: A Global Framework for Action" Project (Chapter 11). In *Freshwater Governance for the 21st Century*, ed. by E. Karar. Volume 6 of the series. *Global Issues in Water Policy*. Springer. pp. 205-227.

Merideth, R., and R. G. Varady. 2016. Gilbert Fowler White. In *Oxford Bibliographies in Environmental Science*, Ed. Ellen Wohl. New York: Oxford University Press. 22pp. Online at: <http://www.oxfordbibliographies.com/view/document/obo-9780199363445/obo-9780199363445-0052.xml?result=42&rskey=4kQliX>.

De Grenade, R., and R. G. Varady. 2015. The Santa Cruz River: Four millennia of water heritage and security in the U.S.-Mexico border region. In *Water and Heritage: Material, Conceptual and Spiritual Connections*, ed. by W. J. H. Willems and H. van Schaik. Sidestone Press. pp. 371-87.

Varady, R. G., A. K. Gerlak, and E. D. McGovern. 2014. Hydrosolidarity and its place in international water diplomacy. In *Hydro Diplomacy: Sharing Water Across Borders*, ed. by G. Pangare. Bangkok: IUCN. pp. 23-31.

Morehouse, B. J., D. B. Ferguson, G. Owen, A. Browning-Aiken, R. Varady, P. Wong Gonzales, and N. Pineda Pablos. 2013. Sustentabilidad y resiliencia en la frontera de Sonora y Arizona: Revisión de literatura sobre tres sistemas ecológico-sociales. In *Estudios sobre Sonora 2011: Instituciones, Procesos Socioespaciales, Simbólica e Imaginario*, ed. by A. Covarrubias Valdenebro and E. Méndez Sáinz. Hermosillo: El Colegio de Sonora. Pp. 323-361.

Varady, R. G., R. Salmón Castelo, and S. Eden. 2013. Key issues, institutions, and strategies for managing transboundary water resources in the Arizona-Mexico border region. In *Shared Borders, Shared Waters: Israeli-Palestinian and Colorado River Basin Water Challenges*, ed. by S. B. Megdal, R. G. Varady, and S. Eden. Leiden: CRC Press/Balkema – Taylor & Francis with UNESCO-IHE. pp. 35-50.

PUBLICATIONS / Book Chapters (cont.)

- Megdal, S. B., R. G. Varady, and S. Eden. 2013. Preface. In *Shared Borders, Shared Waters: Israeli-Palestinian and Colorado River Basin Water Challenges*, ed. by S. B. Megdal, R. G. Varady, and S. Eden. pp. xi-xiii.
- Eden, S., R. G. Varady, S. B. Megdal, and J. Cleveland. 2013. Introduction. In *Shared Borders, Shared Waters: Israeli-Palestinian and Colorado River Basin Water Challenges*, ed. by S. B. Megdal, R. G. Varady, and S. Eden. pp. 1-4.
- Varady, R. G., S. Eden, and S. B. Megdal. 2013. Concluding insights. In *Shared Borders, Shared Waters: Israeli-Palestinian and Colorado River Basin Water Challenges*, ed. by S. B. Megdal, R. G. Varady, and S. Eden. pp. 275-276.
- Wilder, M., R. G. Varady, and G. M. Garfin. 2012. Moving forward from vulnerability to adaptation: Theory, methodology, and context. In Wilder, M., et al. (eds.) *Moving Forward from Vulnerability to Adaptation: Climate Change, Drought, and Water Demand in the Urbanizing Southwestern United States and Northern Mexico*. Tucson: Udall Center. pp. 3-16.
- Wilder, M., J. Slack, R. G. Varady, C. A. Scott, A. Pritchard, B. Morehouse, E. McGovern, O. Lai, and R. Beaty. 2012. Urban water vulnerability and institutional challenges in Ambos Nogales. In Wilder, M., et al. (eds.) *Moving Forward from Vulnerability to Adaptation: Climate Change, Drought, and Water Demand in the Urbanizing Southwestern United States and Northern Mexico*. Tucson: Udall Center. pp. 19-53.
- Lopez-Hoffman, L., E. D. McGovern, R. G. Varady, and K. Flessa. 2009. Introduction. In *Conservation of Shared Environments: Learning from the United States and Mexico*. Lopez-Hoffman, L., E. McGovern, R. G. Varady, and K. W. Flessa, eds. UA Press. pp. 1-4.
- Varady, R. G., and E. Ward. 2009. Transboundary conservation in context: What drives environmental change? In *Conservation of Shared Environments: Learning from the United States and Mexico*. pp. 9-22.
- López-Hoffman, L., R. G. Varady, and P. Balvanera. 2009. Finding mutual interest in shared ecosystem services: New approaches to transboundary conservation. In *Conservation of Shared Environments: Learning from the United States and Mexico*. pp. 137-153.
- Lopez-Hoffman, L., E. D. McGovern, R. G. Varady, and K. Flessa. 2009. Guiding principles for framing transboundary conservation (Conclusion). In *Conservation of Shared Environments: Learning from the United States and Mexico*. pp. 293-298.
- Lopez-Hoffman, L., E. D. McGovern, R. G. Varady, and K. Flessa. 2009. Energizing transboundary conservation – Three easy steps (Afterword). In *Conservation of Shared Environments: Learning from the United States and Mexico*. pp. 299-301.
- Lopez-Hoffman, L., E. D. McGovern, R. G. Varady, K. Flessa, and C. A. de la Parra. 2009. A Tribute (to IBWC Commissioners). In *Conservation of Shared Environments: Learning from the United States and Mexico*. p. vi.
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SCHOLARLY PRESENTATIONS

Symposia, seminars, and workshops

- Varady, R. G. 2017. Lessons learned from the International Water Security Network. Presented at session, "Sharing Knowledge for Water Security," at "Knowledge Forum on Water Security and Climate Change: Innovative solutions for sustainable water resources management." UNESCO. Paris. 18 Oct.
- Varady, R. G. 2017. Outcomes of the University of Arizona "Conference on Science Diplomacy and Policy," Presented at session, "Water Diplomacy: Building Peace Through Water Cooperation," at "Knowledge Forum on Water Security and Climate Change: Innovative solutions for sustainable water resources management." UNESCO. Paris. 20 Oct.
- Varady, R. G. 2016. Introducción a la seguridad hídrica – Contexto Institucional: International Water Security Network (IWSN) [Introduction to water security – Institutional context]. Presented at Taller de capacitación en seguridad hídrica y manejo de la demanda del agua en las Américas áridas, "Buenas prácticas de gobernanza del agua: Adaptando enfoques exitosos hacia la seguridad hídrica en Mendoza, Argentina (y en otros lugares)" [Training workshop on water security and demand management in the arid Americas, "Good water governance practices: Adapting successful approaches to water security"]. Mendoza, Arg. 3 Aug.
- Varady, R. G. 2016. Gobernanza y Gestion de las Aguas Subterráneas. Presented at Taller de capacitación en seguridad hídrica (as above) Mendoza, Arg. 3 Aug.

Varady, R. G., S. Buechler, A. K. Gerlak, C. A. Scott, M. O. Wilder, and A. A. Zuniga-Teran. 2016. Aspects of water ethics and governance. Presented at Water Ethics Symposium, "Building Strategies for Water Ethics: Future Directions in Research and Education." Univ. of Arizona. Tucson. 25 April.

Varady, R. G., and C. A. Scott. 2016. Water security, governance, science-policy dialogues, and capacity building: Linking the International Water Security Network (IWSN) and the AQUASEC Center of Excellence for Water Security to the UNESCO proposed initiatives: "Enhancing Climate Services for Improved Water Resources Management..." (ClimWaR-LAC) and "Addressing Water Security: Climate Impacts and Adaptation Responses in Africa, Asia and Latin America-Caribbean." Workshop of UNESCO International Hydrological Programme and Government of Flanders Brussels, Belgium. 25 February 2016.

Varady, R. G., C. A. Scott, and S. B. Megdal. 2015. Gobernanza de acuíferos transfronterizos Estados Unidos-México (Governance of transboundary aquifers in the U.S.-Mexico border region). Presented (by Varady) at Curso sobre "Gestión Integrada de Aguas Subterráneas" (Course on "Integrated Management of Groundwater"). AECID/RALCEA. Cartagena, Colombia. 7 Sept.

SCHOLARLY PRESENTATIONS / Symposia, seminars, workshops (cont.)

Varady, R. G., and S. B. Megdal. 2015. Gobernanza y gestión de las aguas subterráneas (Governance and management of groundwater). Keynote, presented (by Varady) at Curso sobre "Gestión Integrada de Aguas Subterráneas" (Course on "Integrated Management of Groundwater"). AECID/RALCEA (La Red Latinoamericana de Centros de Conocimiento de Gestión del Recurso Hídrico [Latin American Network of Centers of Expertise on Water Resources Management]). Cartagena, Colombia. 7 Sept.

Varady, R. G., R. de Grenade, and C.A. Scott. Water security: Passing fad — or durable concept? 2015. Keynote, presented at inception meeting, "Addressing Water Security: Climate Impacts and Adaptation Responses." UNESCO-IHP. Paris, France. 9 Feb.

Varady, R. G., C. A. Scott, R. de Grenade, B. Thapa, C. Staddon, E. Hayes. 2015. IWSN (International Water Security Network) and AQUASEC (Center of Excellence for Water Security in the Arid Americas). Presented at Inception Meeting, "Addressing Water Security: Climate Impacts and Adaptation Responses." UNESCO-IHP. Paris, France. 9 Feb.

Varady, R. G., C. A. Scott, F. Meza. 2014. AQUASEC: Centro de Excelencia en Seguridad Hídrica. Presented at workshop of the 4th Regional Event of RALCEA. Panama City, Panama. 17 Nov.

Varady, R. G. 2014. Quantifying and measuring: background and context. Presented at workshop/writeshop, "Metrics and Measurement of Adaptation: Advances in Water Research in the Arid Americas." U. Arizona. Tucson, AZ. 2 Oct.

Varady, R. G. 2014. Transboundary groundwater governance in the U.S.-Mexico border region. Presented at workshop, "An Uncommon Dialogue." Organized by Bill Lane Center for American West, Stanford Univ. Palo Alto, CA. 2-3 June.

Varady, R. G. 2014. Nexus in a transboundary context: Exploring the impacts on water security, how strategies also contribute towards climate change mitigation and adaptation. Presented at workshop, "Water-Energy-Food Nexus – A strategy for future water security?" Org. by GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit). Mexico City. 22 May 2014. Also presented at Universidad Nacional Mayor de San Marcos, Lima, Peru. 30 June 2014. And Instituto de Ciencias Humanas, Sociales y Ambientales, Centro Científico Tecnológico, CONICET, Mendoza, Arg. 10 July.

Varady, R. G., and C. A. Scott. 2014. Strengthening transboundary water security: Adaptive management to reduce climate-change vulnerability. Presented (via Skype) at MWAR-LAC (Managing Water Resources in Arid and Semiarid Zones of Latin Amer.) Coordination Meeting, "Addressing Water Security: Climate Impacts and Adaptation Responses in Latin Amer. and the Caribbean." Montevideo, Urug. 4 Feb.

Varady, R. G. 2013. Antecedentes y contexto de la investigación sobre el agua y clima en la región occidental de la frontera México y Estados Unidos de Norteamérica (Background and context of climate-

related research in the western U.S.-Mexico border region). Presented at “Taller sobre Cambio Climático: Temática de Sequía Regional y Foro con Investigadores Internacionales,” en el Marco de PRONACOSE. CONAGUA. México, D.F. 10 Dec.

Varady, R. G., and S. B. Megdal. 2013. Global groundwater policy and governance. Presented (by R. Varady) at Fifth Regional Consultation: Europe, Central Asia and North America (UNECE region). GEF Project “Groundwater Governance: A Global Framework for Country Action” (FAO, GEF, IAH, UNESCO-IHP, WB). The Hague, Netherlands. 19 Mar. (invited).

Megdal, S. B., R. G. Varady, and A. K. Gerlak. 2013. Groundwater governance in a federal framework: Results of a survey of the 50 states of the USA. Presented (by S. Megdal) at Fifth Regional Consultation. GEF Project “Groundwater Governance.” The Hague, Neth. 20 Mar. (invited).

Varady, R. G. 2013. Israeli-Palestinian, Colorado River, and transboundary water-management challenges. Presented at Postgraduate Seminar Series and Advanced Masters Course on International Development and Social Cohesion. Univ. of Luxembourg. Luxembourg, 15 Mar. 2013.

SCHOLARLY PRESENTATIONS / Symposia, seminars, workshops (cont.)

Varady, R. G., S. B. Megdal, and S. Eden. 2012. Shared borders, shared waters: Israeli-Palestinian and Colorado River water challenges. Presented (by R. Varady) at Seminario Internacional “Agua y Fronteras ante el Cambio Climático,” org. by El Colegio de la Frontera Norte (COLEF) and El Centro de Investigaciones y Estudios Superiores en Antropología Social (CIESAS). Monterrey, N.L., Mexico. 26 Oct.

Varady, R. G., and S. B. Megdal. 2012. Global groundwater policy and governance. Presented at Fourth Regional Consultation, Arab States Region. GEF Project “Groundwater Governance: A Global Framework for Country Action” (FAO, GEF, IAH, UNESCO-IHP, WB). Amman, Jordan. 9 Oct. 2012 (invited). And at First Regional Consultation, Latin America and the Caribbean. Montevideo, Uruguay. 16 Apr.

Varady, R. G., F. van Weert, S. B. Megdal, A. Gerlak, C. Abdalla Iskandar, L. House-Peters, and Z. Sugg. 2012. Global groundwater policy and governance: The GEF project on groundwater governance and other observations. Presented (by Varady) at UN Economic Commission for Europe (UNECE) Capacity for Water Cooperation Workshop on Legal, Institutional and Technical Aspects of Managing Transboundary Groundwaters. Almaty, Kazakhstan, 29 May (inv.).

Wilder, M., I. Aguilar Barajas, J. McEvoy, R. G. Varady, S. B. Megdal, C. A. Scott, and N. Pineda. 2012. Desalination technology in a binational context: Systemic implications for water, energy, and environment in the Arizona-Sonora portion of the U.S.-Mexico border. Presented by M. Wilder and I. Aguilar Barajas at the Puentes Consortium Mexico-U.S. Higher Education Leadership Forum. Houston, TX. 26 April (inv.).

Varady, R. G., F. van Weert, S. B. Megdal, A. Gerlak, C. Abdalla Iskandar, and L. House-Peters. 2012. Groundwater policy and governance: The GEF project on global groundwater governance. Presented (by Varady) at Seminario Lanzamiento Centro AQUASEC Sobre Seguridad Hídrica en las Américas (Seminar on the Launch of the AQUASEC Center on Water Security in the Americas). Centro de Cambio Global, Pontificia Universidad Católica de Chile. Santiago, Chile. 13 March.

Varady, R. G., S. B. Megdal, A. Gerlak, C. Abdalla Iskandar, J. L. Martín Bordes, and F. van Weert. 2011. Groundwater Policy and Governance. Presented at Inception Meeting, GEF Groundwater Governance (GWG) Project. UNESCO IHP. Paris, France. 6 Sept. (invited).

Varady, R. G. 2011. Historical Approaches to Water Governance and Policies: Local to Global Paradigms. Presented at Short Course on World History of Water Management. North-West University and UNESCO-IHE Institute for Water Education. Vanderbiltpark, South Africa. 30 June (invited).

Varady, R. G. 2011. Global water governance: Confronting aridity and transboundary issues. Presented at workshop, “Water: Managing a Precious Resource – Transatlantic Views.” The French-American Foundation/France and the U.S. Embassy in France. Paris, France. 23 Mar.

Varady, R. G., G. M. Garfin, C. A. Scott, M. Wilder, N. Pineda. 2010. Integrated climate and water resources assessment for adaptive management in western North America. Presented at symposium, "Rewriting water history, reconstructing water politics, exploring water institutions in Israel/Palestine." French Research Centre in Jerusalem (CFRJ). Jerusalem, Israel. 28-29 Nov.

Wilder, M., C. A. Scott, N. Pineda, G. Garfin, R. G. Varady, J. McEvoy, and J. Slack. 2010. Water and vulnerability: Building adaptive capacity in urban areas of the U.S.-Mexico border. Presented at Open Science Meeting of the Global Land Project (GLP). Tempe, AZ. 17 Oct.

Varady, R. G. 2010. Bushwhacking through the wilds of environmental policy: An interdisciplinarian's crossborder adventures through arid lands, changing climate, and sustainability. Lecture in the Guy T. McBride, Jr. Honors Program in Public Affairs. Colorado College of Mines. Denver, CO. 22 Sept.

Varady, R. G. 2010. Transboundary aquifer institutions, policies, and governance: A global perspective on Arizona-Sonora aquifers. Presented in session, "Arizona-Sonora Transboundary Aquifer Assessment, Management, and Policy," at the Arizona Hydrological Society–International Association of Hydrogeologists Symposium. Tucson, AZ. 2 Sept.

SCHOLARLY PRESENTATIONS / Symposia, seminars, workshops (cont.)

Varady, R. G., G. M. Garfin, C. A. Scott, M. Wilder, and N. Pineda. 2010. Integrated climate and water resources assessment for adaptive management in Western North America. AGU Meeting of the Americas. Foz Do Iguacu, Brazil. 9 Aug.

Varady, R. G. 2010. Findings from project, "Information flows and policy: Use of climate diagnostics and cyclone prediction for adaptive water-resources management under climatic uncertainty in western North America." Presented at Synthesis Meeting of the Inter-American Institute for Global Change Research (IAI). Buenos Aires, Arg. 5 Aug.

Varady, R. G. 2010. Global water governance: Confronting aridity, climate change, and transboundary conflict. Presented as part of Roy F. Weston Distinguished Global Sustainability Lecture Series, "Balancing Global Water Demands for Food, Sanitation, Energy, and Ecosystems." Center for Sustainability and the Global Environment, Gaylord Nelson Institute for Environmental Studies, University of Wisconsin-Madison. 29 Apr. (invited).

Varady, R. G. 2010. Environmental change and institutions in the U.S.-Mexico border region. Presented at UC MEXUS Colloquium, "Perspectives on the U.S.-Mexico Border Wall." Riverside, CA. 22 Feb. (inv.).

Varady, R. G., I. Aguilar Barajas, and G. Mejía Velázquez. 2010. Environment and security in the U.S.-Mexico border region: Water and air issues. Presented at the Puentes Consortium Mexico-U.S. Higher Education Leadership Forum. Houston, TX. 14 Jan. (invited).

Varady, R. G. 2009. Historical Approaches to Water Governance and Policies: Local to Global Paradigms. Presented at Third Short Course on World History of Water Management. UNESCO-IHE Institute for Water Education. Delft, Netherlands. 17 Sept. (invited).

Varady, R. G., R. Salmón Castelo, and S. Eden. 2009. Key issues, institutions, and strategies for managing transboundary water resources in the Arizona-Mexico border region. Presented at "Arizona-Israeli-Palestinian Water Management and Policy Workshop: Economic, Environmental, and Community Implications of Expanding Reuse and Desalination for Future Water Supplies." Tucson, AZ. 1 Sept.

Varady, R. G., K. Meehan, J. Rodda, and E. McGovern. 2009. Global water initiatives and world water governance. Presented (by Varady) to El Grupo de Investigación Internacional "Agua, Ciudad y Territorio: Gobernabilidad y acceso al agua en las Américas," sponsored by Centro Interdisciplinario del Agua (CETA). Centro Argentino de Ingenieros (CAI). Buenos Aires, Argentina. 29 June. (invited).

Varady, R. G. 2009. Information flows and policy: Use of climate diagnostics and cyclone prediction for adaptive water-resources management under climatic uncertainty in western North America. Presented at

Joint Principal Investigators' Meeting of the Inter-American Institute for Global Change Research (IAI). Montevideo, Uruguay. 24 June.

Varady, R. G. 2009. Historical Approaches to Water Governance and Policies. Presented at Israeli-Palestinian Science Organization. Jerusalem, Israel. 18 Mar. (invited)

Varady, R. G. 2009. Navigating institutional challenges to cross-border climate research. Presented at International Workshop for CHANGE (Climate and Hydrology Academic Network for Governance and the Environment). Mexico City, D.F., Mexico. 5 Mar. (invited).

Varady, R. G. 2008. Historical Approaches to Water Governance and Policies Local to Global Paradigms. Presented at Second Short Course on World History of Water Management. UNESCO-IHE Institute for Water Education. Delft, Netherlands. 17 Sept. (invited).

Varady, R.G., and E. McGovern. 2008. Globalizing water: Governance through global water initiatives. Presented (by Varady) at Second Isla Victoria Workshop, "The Future of Water." Universidad Nacional de San Martín, Club of Rome, others. Isla Victoria, Argentina. 12-16 May. (invited).

SCHOLARLY PRESENTATIONS / Symposia, seminars, workshops (cont.)

Historical approaches to water governance and policies local to global paradigms. 2008. Presented at the Isla Victoria Workshops, "The Future of Water." Universidad Nacional de San Martín, Club of Rome. Isla Victoria, Argentina. 11 May. Also presented at Short Course, "World History of Water Management." UNESCO-IHE (Institute for Water Education). Delft, The Netherlands. 16 Sept. (invited).

Varady, R. G. 2008. Information flows and policy: Use of climate diagnostics and cyclone prediction for adaptive water-resources management under climatic uncertainty in western North America. Presented at Joint Principal Investigators' Meeting of the Inter-American Institute for Global Change Research (IAI). Panama City, Panama. 21 Feb.

Browning-Aiken, A., D. Goodrich, R. G. Varady, and H. Richter. 2007. A River Running in the Desert: Lessons for Integrated Water Resources Management from the San Pedro HELP Basin on the U.S.-Mexico Border. Invited presentation (presented by Browning-Aiken) at HELP Southern Symposium 2007, "HELP in Action." Johannesburg, South Africa. 4-9 Nov.

Browning-Aiken, A., D. Goodrich, R.G. Varady, and H. Richter. 2007. Institutional and legal lessons for successful HELP implementation: The Upper San Pedro Basin. Invited presentation (pres. by Browning-Aiken) at HELP Southern Symposium 2007, "HELP in Action." Johannesburg, South Africa. 4-9 Nov.

Varady, R. G. 2007. Water governance and policies: Local to Global paradigms. Presented at First Short Course on World History of Water Management. UNESCO-IHE Institute for Water Education. Delft, Netherlands. 18 Sept. (invited).

Varady, R. G., M. Wilder, B. Morehouse, and G. Garfin. 2007. Institutions and social impacts: the U.S.-Mexico border region as an example. Presented (by Varady) at Center for Research on the Changing Earth System (CRCES) Workshop on Societal Impacts of Decadal Climate Variability in the United States. Waikoloa, Hawaii. 26-27 Apr. 2007. (invited).

Goodrich, D.C., H. Richter, R. Varady, A. Browning-Aiken, J. Shuttleworth. 2006. The Upper San Pedro Partnership: A Case Study of Successful Strategies to Connect Science to Societal Needs. Fall AGU Meeting. San Francisco, CA. 11-15 Dec..

Browning-Aiken, A., B. Morehouse, and R. G. Varady. 2006. Climate, water management and policy in the San Pedro River Basin: Report on Mexican stakeholder surveys II. Presented (by Browning-Aiken) at Seminario Internacional sobre Gestão Social das Bacias Hidrográficas. Urubici and Florianopolis, Santa Catarina, Brazil. 15-20 Nov.

Varady, R. G., and K. Meehan. 2006. A flood of institutions? Sustaining global water initiatives. Presented (by Varady) at the International Symposium on History, Water and Engineering. Delft University of Technology. Delft, The Netherlands. 9 Nov. (invited).

Varady, R. G., and M. Iles-Shih. 2005. Global water initiatives: What do the experts think? Report on a survey of leading figures in the 'World of Water.' Presented (by Varady) at workshop, *Impacts of Mega-Conferences on Global Water Development and Management*, sponsored by Third World Centre for Water Management, Bangkok, Thailand, 29-30 Feb., also presented (by Varady) at Instituto Mexicano de Tecnología del Agua, Cuernavaca, Mexico. 17 Aug. (invited).

Varady, R. G. 2004. Enjeux environnementaux le long de la frontière Mexique/États Unis. Citoyens et Institutions: les conflits de l'eau (Environmental issues along the U.S.-Mexico border. Citizens and institutions: water conflict). Seminar presented at Université Sorbonne Nouvelle Paris III, Institut des Hautes Etudes de l'Amérique Latine and CNRS Centre de Recherche et de Documentation sur l'Amérique Latine, Paris, France (18 May). (invited).

Varady, R. G. 2004. Global water initiatives. Seminars presented at Fraunhofer Institute of Technology Systems and Innovation Research, Karlsruhe, Germany (23 Apr.), Swedish Meteorological and Hydrological Society, Norrköping, Sweden (4 May), Tampere University of Technology Institute of Environmental Engineering and Biotechnology, Tampere, Finland (7 May). (invited).

SCHOLARLY PRESENTATIONS / Symposia, seminars, workshops (cont.)

Browning-Aiken, A., and R. G. Varady. 2003. Binational cooperation and community participation in the San Pedro River basin. Presented (by Browning-Aiken) at the International Forum on Social Management of Hydrological Basins. Hermosillo, Sonora, Mexico. 4 Apr.

Varady, R. G., and A. Browning-Aiken. 2003. HELP framework for application of water technologies at the catchment scale: the San Pedro River basin. Presented (by Browning-Aiken) at Workshop on Water Technologies for the Developing World. Kyoto, Japan. 15 Mar.

Varady, R. G. 2003. The Dialogue on Water and Climate (DWC) and the San Pedro dialogue. Presented at workshop, "Managing Water Resources Under Conditions of High Climatic Variability in the U.S.-Mexico Border Region." Organized by NOAA. La Paz, Mexico. 15 Jan.

Varady, R. G., and A. Browning-Aiken. 2002. The Upper San Pedro River basin: pioneering an informal binational dialogue. Presented (by Varady) at Synthesis workshop of the Dialogue on Water and Climate. Dhaka, Bangladesh. 17 Dec.

Varady, R. G., and B. J. Morehouse. 2002. Moving borders from the periphery to the center: river basins, political boundaries, and water management policy. Presented (by Browning-Aiken) at First International Symposium on Transboundary Waters Management. Monterrey, Mexico. 19 Nov.

Browning-Aiken, A., R. G. Varady, and D. Moreno. 2002. Binational coalition-building: a case study of water-resources management. Presented (by Browning-Aiken) at First International Symposium on Transboundary Waters Management. Monterrey, Mexico. 19 Nov.

Varady, R. G., and A. Browning-Aiken. 2002. The San Pedro as a HELP basin. Presented (by Varady) at HELP Symposium, "Towards Integrated Catchment Management: Increasing the Dialogue between Scientists, Policy Makers and Stakeholders." Kalmar, Sweden. 18-22 Aug. (invited).

Varady, R. G., R. Merideth, B. J. Morehouse, and D. Goodrich. 2002. A binational dialogue on water and climate in the San Pedro River basin of Mexico and Arizona: making climate information digestible. Presented (by Varady) at Workshop of the Dialogue on Water and Climate. Wageningen, Neth. 14 Mar.

Browning-Aiken, A., J. E. De Steiguer, and R. G. Varady. 2002. Two Arizona watershed initiatives: evaluating public partnerships as a means of water management planning. Presented (by Browning-Aiken) at annual mtg. of Arizona Riparian Council, "Water Resources and Sustaining Riparian Areas." Wickenburg, AZ. 26 Apr.

Varady, R. G., and A. Browning-Aiken. 2001. The birth of a Mexican watershed council in the San Pedro basin in Sonora. Presented (by Varady) at symposium, "Planeación y Cooperación Transfronteriza en la Frontera México-Estados Unidos" ("Transboundary Planning and Cooperation in the U.S.-Mexico Border Region"), organized by El Colegio de la Frontera Norte. Ciudad Juárez. 30 Nov. (invited).

Varady, R. G., and A. Browning-Aiken. 2001. Stakeholders and research collaboration in the San Pedro River Basin, One of the American Continent's First HELP Demonstration Basins. Presented (by Varady) at Simposio sobre Problemática Ambiental en Cuencas de México y Estados Unidos de América (Symposium on Environmental Issues in Basins in Mexico and the United States), organized by Mexico's Comisión Nacional del Agua (National Water Commission). Guadalajara, Mexico. 9 Nov. (invited).

Varady, R. G., and M. A. Moote. 2001. Evaluating collaborative efforts. . . . a typology and review of approaches. Presented (by Varady) at Hewlett Foundation workshop on Evaluation of Collaborative Initiatives. Palo Alto, CA. 2 Mar. (invited).

Varady, R. G., D. Liverman, O. Chávez, R. Sánchez, and A. Browning-Aiken. 2001. Environmental change in the U.S.-Mexico border region: issues and actions. Presented (by Varady) at Seminario, "Fronteras y Comunidad Latina en America del Norte," organized by CISAN (Centro de Investigaciones Sobre América del Norte), Universidad Nacional Autónoma de México. Mexico City. 2-4 July (invited).

SCHOLARLY PRESENTATIONS / Symposia, seminars, workshops (cont.)

Varady, R. G., and M. A. Moote. 1999. Water allocation options for the Upper San Pedro Basin: assessing the social landscape. Presented (by Varady) at Ford Foundation-sponsored "Binational Conference on Groundwater Management." La Paz, Baja California Sur. 8 Feb.

Varady, R. G., and R. Yarde. 1998. The use of a simulation exercise for water conflict in the border region. Presented (by Varady) at the 11th annual symposium of the Arizona Hydrological Soc. Tucson, AZ 24 Sept.

Sprouse, T., D. Cory, and R. G. Varady. 1996. Potentially polluting activities and the regulatory control of environmental risk: the Santa Cruz County [Arizona] approach to aquifer protection. Presented (by Sprouse) at the 9th annual symposium of the Arizona Hydrological Society. Prescott, AZ 12-14 Sept.

Varady, R. G. 1993. SCERP (Southwest Center for Environmental Research and Policy): an outsider's inside view. Presented at special conference, "The U.S.-Mexico Border: A Region Under Stress," funded by the Ford Foundation. Santa Fe, NM. 21 Nov. (invited).

Varady, R. G. 1991. Are EPA and residents of the U.S.-Mexico border speaking the same language? Comments presented at U.S. EPA-Mexico SEDUE hearings on Integrated Border Environment Plan (IBEP). Nogales, AZ. 26 Sept. 3 pp.

Varady, R. G. 1991. Ethics and the transfer of remote sensing technology to developing countries. Presented at the Aspen Global Change Institute Summer Session I on "Remote Sensing, Environmental Change, and Human Health." Aspen, CO. 24 Jul. (invited).

Conferences

Varady, R. G., A. A. Zuniga-Teran, C. A. Scott, T. Albrecht. 2016. Resilience and diversity: Managing the water-energy nexus to enhance water security. Presented (by Varady) at conference, "International Perspective on Water Resilience," at the Schumacher Institute. Bristol, UK. 11 Oct.

Varady, R. G., C. A. Scott, and A. A. Zúñiga-Terán. 2016. Transboundary water governance and its significance for water security: Examples from IWSN experiences. Presented at Intl. Symp. on Ecosys. Benefits & Water Security. Insaka Consort. & Intl. Water Security Network. Kafue, Zambia. 15 June 2016.

Gerlak, A. K., L. House-Peters, T. Albrecht, C. Cook, R. Routson de Grenade, C. A. Scott, A. Zuñiga Terán, and R. G. Varady. 2016. Water security: A critical review of recent studies. Presented at annual meeting of International Studies Association, Atlanta, GA, 17 Mar. 2016.

Varady, R. G., C. A. Scott, R. de Grenade. 2015. Strengthening transboundary water security: adaptive management to reduce climate-change vulnerability. Presented (by R. Varady) at joint session "Water security, science, systems and policy," XVth International Water Resources Association (IWRA) World Water Congress. Edinburgh, Scotland. 26 May.

Scott, C. A., R. G. Varady, R. de Grenade, and B. Thapa. 2015. Nexus or security? Water, energy, and food. Presented (by C. Scott) at joint session "Water security, science, systems and policy," XVth International Water Resources Association (IWRA) World Water Congress. Edinburgh, Scotland. 26 May.

Varady, R. G. 2015. Actors: why power matters and how we understand it in water governance. Presented at session "Questioning water governance: From concepts to practice," XVth International Water Resources Association (IWRA) World Water Congress. Edinburgh, Scotland. 25 May.

Varady, R. G., and C. A. Scott. 2014. Water security and adaptive capacity in a transboundary context: Science-policy dialogues in the U.S.-Mexico border region. Presented at International Water Security Network (IWSN) Regional Launch. Monash South Africa. Johannesburg, S. Africa. 16 Sept.

Megdall, S. B., A. K Gerlak, R. G. Varady, and Huang, Y.-L. 2014. Groundwater management & governance: A policy perspective. Presented (by Y.-L. Huang) at 2014 National Ground Water Assoc. Groundwater Summit. Denver, CO. 4-7 May. Also (by S. Megdall) at 2014 Annual UCOWR-NIWR-CUAHSI Conference, "Water Systems, Science, and Society Under Global Change." Tufts Univ. Medford, MA. 18-20 June.

SCHOLARLY PRESENTATIONS / Conferences (cont.)

Varady, R. G., C. A. Scott, and M. Wilder. 2014. Transboundary climate change adaptation under drought in the Americas. Presented (by R. Varady) at International Conference on Cooperation for Water, Energy, and Food Security in Transboundary Basins in a Changing Climate. Ho Chi Minh City, Viet Nam, 2-3 Apr.

Megdall, S. B., A. K Gerlak, and R. G. Varady. 2013. Groundwater governance in the U.S.: Results of a survey of the 50 states. Presented (by S. Megdall) at the AWRA (American Water Resources Assoc.) Annual Water Resources Conference. Portland, OR. 5 Nov.

Megdall, S. B., A. K Gerlak, and R. G. Varady. 2013. Groundwater management: a policy perspective. Presented (by S. Megdall) at the Groundwater Protection Council Annual Forum, "Groundwater Protection: Reflecting Progress & Responding to the Future." St. Louis, MO. 23 Sept.

Varady, R. G. 2013. Water cooperation builds peace? A historical perspective. Presented at thematic session, "Water Cooperation Builds Peace" at World Water Day. The Hague, The Netherlands. 22 Mar.

Megdall, S. B., A. Aureli, and R. G. Varady. 2012. Developing a framework for groundwater governance. Presented (by S. Megdall) at "Drylands, Deserts and Desertification Conf." Sede Boqer, Israel. 12 Nov.

Varady, R. G., C. A. Scott, M. Wilder, and G. Garfin. 2012. Building a path to AQUASEC: Regional antecedents and precursors to a continent-wide science-policy network. Presented (by G. Garfin) at "Adaptation Futures" Conference. Tucson, AZ. 29-31 May.

Wilder, M., R. G. Varady, J. Correia, and S. Kelly. 2012. Unpacking the adaptation deficit: Key indicators of capacity-building in water management in the U.S.-Mexico border region. Presented (by M. Wilder) at "Adaptation Futures" Conference. Tucson, AZ. 29-31 May.

Correia, J., S. Kelly, H. Bruckner, S. Marley, M. Wilder, G. Garfin, R. G. Varady, and M. Vásquez-León. 2012. New directions in adaptive capacity and resilience in arid regions. Presented (by J. Correa) at "Adaptation Futures" Conference. Tucson, AZ. 29-31 May.

Wilder, M., G. Garfin, N. Pineda-Pablos, R. G. Varady, C. Scott, M. Vásquez-León, J. Correia, S. Kelly, H. Bruckner, A. Quijada, and S. Marley. 2012. Building adaptive capacity for water management in the U.S.-

Mexico border region: scientist-stakeholder collaboration to achieve socioecological resilience. Presented (by M. Wilder) at International Human Dimensions program (IHDP) "Planet Under Pressure 2012: New Knowledge Towards Solutions" Conference. London, U.K. 28 Mar.

Varady, R. G., C. A. Scott, and S. B. Megdal. 2011. Localizando decisiones sobre las aguas subterráneas en la Alta Cuenca del Río San Pedro de Estados Unidos y México (Localizing decisionmaking on groundwater in the U.S.-Mexico Upper San Pedro River Basin). Presented at Conference, "The Management of the Guarani Aquifer System: An Example of Cooperation." São Paulo, Brazil. 22 Sept. (invited).

Varady, R. G., C. A. Scott, S. B. Megdal, and J. P. McEvoy. 2010. Transboundary aquifer institutions, policies, and governance: A preliminary inquiry. Presented at ISARM (Internationally Shared [Transboundary] Aquifer Resources Management). Paris, France. 6-8 Dec.

Megdal, S. B., R. Senci3n, C. A. Scott, F. D3az, L. Oroz, J. Callegary, R. G. Varady. 2010. Institutional assessment of the transboundary Santa Cruz and San Pedro aquifers on the United States–Mexico border. Presented at ISARM (Internationally Shared [Transboundary] Aquifer Resources Management). Paris, France. 6-8 Dec.

Scott, C. A., R. G. Varady, N. Pineda, G. M. Garfin, M. Wilder, A. Browning-Aiken, L. Farfan, M. Montero. 2010. Adaptive water management in the United States-Mexico border region: Agriculture and Urban Growth under climate change and variability. Presented at Global Land Project Open Science Meeting 2010. Tempe, AZ. 18 Oct.

Wilder, M., R. G. Varady, C. A. Scott, N. Pineda, G. M. Garfin, J. McEvoy, and J. Slack. 2010. Water and vulnerability: Building adaptive capacity in urban areas of the U.S.-Mexico border. Presented at Global Land Project Open Science Meeting 2010. Tempe, AZ. 18 Oct.

SCHOLARLY PRESENTATIONS / Conferences (cont.)

Varady, R. G., C. A. Scott, M. Wilder, G. M. Garfin, and N. Pineda. 2010. Integrated climate and water resources assessment for adaptive management in western North America. Presented at the American Geophysical Union 2010 Meeting of the Americas. Foz do Iguaçu, Brazil. 9 August.

Wilder, M., C. Scott, N. Pineda Pablos, R. G. Varady, G. Garfin, and J. McEvoy. 2009. Adapting across boundaries: Knowledge, social learning and resilience in the US-Mexico border region. Paper presented at Earth Systems Governance Conference. Amsterdam, Netherlands. 3 Dec.

Varady, R. G., M. Wilder, C. A. Scott, J. McEvoy, N. Pineda, B J. Morehouse, and G. Garfin. 2009. Institutions and Societal Impacts of Climate in the Arizona-Sonora Portion of the U.S.-Mexico Border Region. Presented (by M. Wilder) at Open Meeting of the International Human Dimensions Program (IHDP). Bonn, Germany. 29 Apr.

Varady, R. G., K. Meehan, and J. Rodda. 2009. Global water initiatives and world water governance. Keynote address (by Varady). Advancing the Science of Limnology and Oceanography (ASLO) biennial Aquatic Sciences Meeting. 28 Jan. Nice, France.

Garfin, G., C. Scott, R. Varady, K. Jacobs, M. Wilder, N. Pineda, R. Diaz, A. Coles, K. Sammler. 2009. Adaptation to Climate Change: Addressing Challenges in the U.S.-Mexico Border Region. ASLO 2009 Aquatic Sciences Meeting, 28 Jan. Nice, France.

Garfin, G., C. Scott, A. Coles, A. Ray, D. Gochis, L. Farfan, T. Cavazos, K. Sammler, R. Varady, M. Wilder, N. Pineda, M. Montero, A. Browning-Aiken, 2009. Information Flows and Policy: Climate, Cyclones, and Adaptive Water-Resources Management at the US-Mexico Border. American Meteorological Society 89th Annual Meeting. Phoenix, AZ. 13 Jan.

Varady, R.G., K. Meehan, and E. McGovern. 2008. Charting the emergence of global water initiatives in world water governance. Keynote address, presented (by Varady) at International Conference on Exploring Transdisciplinary Discourses: Water, Society and the Environment in Africa. Organized by North-West Univ., in collaboration with International Water History Association (IWHA). Drakensberg, S. Africa. 20-24 Apr.

Varady, R.G. 2008. Water in the U.S.-Mexico border region: A look at hotspots. Presented at Colloquium at North-West University. Gauteng, South Africa. 29 April. Also presented at Séminaire Interdisciplinaire sur le Développement Durable (SIDDD). Lille, France. 18 Sept.

Varady, R.G., G. Garfin, B. Morehouse, and M. Wilder. 2007. Institutions and societal impacts of climate in the Lower Colorado and San Pedro Basins of the U.S.-Mexico Border region. Presented at AGU Joint Assembly. Acapulco, Mexico. 25 May.

Goodrich, D. H. Richter, R. Varady, A. Browning-Aiken, and J. Shuttleworth. 2007. The Upper San Pedro Partnership: A case study of successful strategies to connect science to societal needs. Presented at AGU Joint Assembly. Acapulco, Mexico. 25 May.

Garfin, G., R. Varady, A. Ray. 2007. Establishing an ongoing binational U.S.-Mexico border climate diagnostic summary: Developing a prototype and navigating the institutional landscape. Presented at AGU Joint Assembly. Acapulco, Mexico. 23 May.

Wilder, M., R.G. Varady, N. Pineda Pablos, A. Browning-Aiken, R. Díaz Caravantes, G. Garfin. 2007. New water management institutions in Mexico's 'New Culture of Water': Emerging opportunities and challenges for effective use of climate knowledge and climate science. Presented at AGU Joint Assembly. Acapulco, Mexico. 23 May.

Varady, R. G., and K. Meehan. 2006. A flood of institutions? Sustaining global water initiatives. Keynote talk presented (by Varady) at conference, "Water, Ecosystems and Sustainable Development in Arid and Semi-Arid Zones." Urumqi, Xinjiang, China. 9-15 Oct.

SCHOLARLY PRESENTATIONS / Conferences (cont.)

Varady, R. G., and A. Browning-Aiken. 2006. Building crossborder alliances in environmental-resources policy and management: Udall Center experiences. Presented (by Varady) at 6th Conf. on Research and Resource Mgt. in the Southwest Deserts: Borders, Boundaries and Time Scales. Tucson, AZ. 4 May.

Garfin, G., R. G. Varady, and A. Ray. 2006. Binational collaboration on a North American monsoon region climate information product. Presented (by Garfin) at 6th Conference on Research and Resource Management in the Southwest Deserts: Borders, Boundaries and Time Scales. Tucson, AZ. 4 May.

Browning-Aiken, A., and R. G. Varady. 2006. Challenges to implementing transboundary water planning: the process of institution building along the U.S.-Mexico border. Presented (by Browning-Aiken) at the 66th conference of the Society for Applied Anthropology (SfAA). Vancouver, Canada. 31 Mar. 2006.

Varady, R. G., and M. Iles-Shih. 2005. The International Hydrological Programme and the 'World of Water.' Keynote talk presented (by Varady) at 4th Conference of the International Water History Association, "Water and Civilization." Paris, France. 1 Dec.

Varady, R. G., and B. Morehouse. 2004. *Cuanto Cuesta?* Environmental costs of development in the U.S.-Mexico border region. Presented (by Varady) at the XXV International Congress of LASA (Latin American Studies Association). Las Vegas, NV. 9 Oct.

Varady, R. G. 2004. Global water initiatives: some observations on their evolution and significance. Presented at the AWRA & IWLRI International Specialty Conference on Good Water Governance for People and Nature, "What Roles for Law, Institutions, Science and Finance?" Dundee, Scotland. 30 Aug.

Browning-Aiken, A., R. G. Varady, B. Morehouse, and A. Davis. 2004. Pioneering a binational dialogue on water and climate: implementing institutional change. Presented (by Varady) at the AWRA & IWLRI International Specialty Conference on Good Water Governance for People and Nature, "What Roles for Law, Institutions, Science and Finance?" Dundee, Scotland. 30 Aug.

Goodrich, D. C., E. Z. Stakhiv, A. Browning-Aiken, K. Vache, J. R. Ortiz-Zayas, J. F. Blanco, F. N. Scatena, R. G. Varady, W. B. Bowden, W. Howland. 2005. The HELP (Hydrology for Environment, Life and Policy) experience in North America. Presented by Goodrich and Stakhiv) at EWRI (ASCE Environmental and Water Resources Institute) Watershed Management Conf. Williamsburg, VA. 20 July.

Varady, R. G. 2003. Global water initiatives: some preliminary observations on their evolution and significance. Presented at 3rd Conf. of International Water History Assoc. Alexandria, Egypt, 12 Dec.

Varady, R. G., A. Browning-Aiken, D. Goodrich, H. Richter, and A. L. Ross. 2003. The Upper San Pedro River basin and the HELP Initiative. Pres. (by Varady) at Third World Water Forum. Shiga, Japan. 21 Mar.

Goodrich, D., R. Strain, H. Richter, R. Lawford, W. J. Shuttleworth, R. G. Varady, and A. Browning-Aiken. 2003. Integration of science and decision making for watershed management: a case study of the Upper San Pedro Basin, a binational HELP pilot basin. Presented (by Goodrich) at EGS-AGU-EUG (Euro.Geophysical Society-American Geophysical Union-Euro. Union of Geosciences) Joint Assembly. Nice, France, 7 Apr.

Pulwarty, R. S., R. G. Varady, B. J. Morehouse, and L. S. Stauber. 2002. Transboundary watersheds: changing environments and streams of thought. Presented (by Pulwarty) at annual meeting of Natural Resources Law Center, "Allocating and Managing Water for a Sustainable Future: Lessons from Around the World." Boulder, CO. 11 June.

Varady, R. G., and A. Browning-Aiken. 2002. The birth of a watershed alliance in the San Pedro basin of the U.S.-Mexico border region. Presented (by Browning-Aiken) at annual meeting of Natural Resources Law Center, "Allocating and Managing Water for a Sustainable Future: Lessons from Around the World." Boulder, CO. 11 June.

SCHOLARLY PRESENTATIONS / Conferences (cont.)

Varady, R. G., and A. Browning-Aiken. 2002. Stakeholders, conflict prevention, and decisionmaking: forging watershed councils in the San Pedro basin. Pres. (by Varady) at annual meeting of Science and Technology Center for the Sustainability of Semi-arid Hydrology and Riparian Areas (SAHRA). Tucson, AZ. 28 Feb.

Varady, R. G. 2001. The HELP (Hydrology for Envir., Life and Policy) initiative. Presented at 4th Inter-American Dialogue on Water Management, "In Quest of Solutions." Foz da Iguaçu, Brazil. 6 Sept. (invited).

Varady, R. G., and A. Browning-Aiken. 2001. Integrated water resources management case study – the San Pedro River Basin. Presented (by Varady) at American Water Resources Association Annual Conference. Albuquerque, NM. 13 Nov. (invited).

Varady, R. G., A. Browning-Aiken, and M. A. Moote. 2001. Watershed councils along the U.S.-Mexico border: the San Pedro Basin. Presented (by Varady) at AWRA/Dundee WLPP intl. water conference, "Globalization and Water Management: The Changing Value of Water." Dundee, Scotland. 7 Aug.

Varady, R. G., Liverman, D., O. Chávez, R. Sánchez, and A. Browning-Aiken. 2001. Environmental issues along the U.S.-Mexico border. Pres. (by Varady) at workshop, "Monsoon Applications and Human Dimensions," organized by the Institute for the Study of Planet Earth, Univ. of Arizona. Tucson, AZ. 18 June (inv.).

Browning-Aiken, A., and R. G. Varady. 2001. Policy implications of serious competition for available water in the Salt/Gila Water Basin: some preliminary observations. Presented (by Browning-Aiken) at annual meeting of the Southwest Indian Agricultural Association (SWIAA). Parker, AZ. 17 Jan. (invited).

Varady, R. G. 2000. Hazardous waste and the U.S.-Mexico border region: reviewing the institutional setting. Presented at the conference, "Border Health: Making a Difference," organized by the International Consortium for the Environment. San Antonio, TX. 13 Mar.

- Varady, R. G., A. Kaus, R. Merideth, J. Campoy, and K. Hankins. 2001. The rise of stakeholder influence in environmental decisionmaking in the U.S.-Mexico border region: livelihood, conservation, and water use in the Lower Colorado River and Delta. Presented (by Varady) at conf., "Scientists and Decision Makers: Acting Together for Sustainable Management of Our River Systems" ("Scientifiques et décideurs. . .") Lyon, France. 6-8 June.
- Varady, R. G., L. Evans, M. A. Moote, and R. Merideth. 1999. Interbasin water transfers in the southwestern United States: the case of the San Pedro River. Presented (by Varady) at the International Workshop on Interbasin Transfer: Looking for Solutions for the Future. International Hydrological Programme of UNESCO. Paris, France. 26-27 Apr.
- Varady, R. G. 1999. New paradigms for transboundary water management institutions. Presented at the Interamerican Water Management Dialogue, sponsored by the Organization of American States. Panama City, Panama. 21-25 Mar. (invited).
- Varady, R. G. 1998. Post-NAFTA institutions for transboundary environmental remediation. Presented (by Varady) at session on Transborder Cooperation at United States/Mexico Conference on Hazardous Waste Management and Technologies. Tucson, AZ. 11 Aug. (invited).
- Cory, D., T. Sprouse, and R. G. Varady. 1996. Aquifer contamination and safe drinking water: the recent Santa Cruz [AZ] County experience. Presented (by Varady) at the 40th annual meeting of the Arizona-Nevada Academy of Sciences. Tucson, AZ. 20 Apr.
- Marsh, S. E., G. Saxe, and R. G. Varady. 1994. Challenge in the development of a binational geographic information system database for the U.S.-Mexico border region. Presented (by Marsh) at annual meeting of the Association of American Geographers. San Francisco, CA. 31 Mar.
- Varady, R. G., and D. M. Gillilan. 1993. Transborder urban water use: a century of cooperation and competition in Nogales. Presented (by Varady) at the annual meeting of the Association of Borderlands Scholars. Corpus Christi, TX. 23 Apr.

SCHOLARLY PRESENTATIONS / Conferences (cont.)

- Varady, R. G., and H. Ingram, and R. Sánchez. 1993. Public health and the "Ambos Nogales Project": an example of cooperative, binational research on transboundary water resources policy. Presented (by Varady) at session on "Past Multi-National Efforts Addressing Environmental and Occupational Health in North America," at annual conf. of Soc. for Occup. and Environ. Health. Arlington, VA. 20-21 Sept. (invited).
- Ingram, H., and R. G. Varady. 1992. The universities, democracy, and public policy. Presented (by Ingram) at the First Richard A. Harvill Conference on Higher Education. Tucson, AZ. 23 Nov. (invited).
- Varady, R. G. 1991. Broadening our horizons and recognizing the role of public participation: some observations on the First National Conference on Climate Change and Water Resources Management. Presented at closing plenary session of First National Conference on Climate Change and Water Resources Management. Albuquerque, NM. 7 Nov. (invited).
- Varady, R. G. 1991. Cooperative, binational research on transborder resource management. Presented at conference, "Environmental Issues of the Border Areas of the United States and Mexico." Southwest Center for Environmental Research and Policy (SCERP). Snowbird, UT. 15 Aug. (invited).
- Varady, R. G. 1991. Environment and free trade: decisionmaking and the knowledge gap. Comments presented in response to presentation by M. H. McKeith at Southwest Border Rural Health Research Conference on "Culture, Policy and Health in the Border States: Research into Action." Tucson, AZ. 7 Jun.
- Varady, R. G., and R. Sánchez. 1991. Transborder water management in Nogales: a binational research approach. Paper presented (by Varady and Sánchez) at the Fourth International Symposium on Health, "The Maquila Industry: Environment and Health." Pan American Health Org. (PAHO). El Paso, TX. 9 May.

Hutchinson, B. S., R. G. Varady, and C. M. Baldwin. 1990. Information management projects in developing countries: the challenge of working with varying levels of infrastructures. Paper presented (by Hutchinson) at the VIIIth World Congress of the International Association of Agriculture Librarians and Documentalists (IAALD). Budapest, Hungary. 30 May.

Varady, R. G., and M. B. Lynham. 1989. Agriculture in a stressed semiarid environment: development constraints and strategies in Mauritania. Paper presented (by Varady) at the Symposium on Appropriate Agricultural Systems for Semi-Arid Regions, American Association for the Advancement of Science (AAAS), Southwestern and Rocky Mountain Division, Las Cruces, NM. 5-8 Apr.

Baldwin, C. M., and R. G. Varady. 1987. Information access in Niger: development of a West African special library. Paper presented (by Baldwin) at the annual conference of the Special Libraries Association. Anaheim, CA. 6-11 Jun. 34 pp.

Varady, R. G., B. S. Hutchinson, C. J. Long, and A. K. Dibble. 1987. Agricultural documentation in the Middle East: a north Yemen case study. Presented (by Hutchinson) at Annual conference, Special Libraries Association. Anaheim, CA. 6-11 Jun. 18 pp.

Varady, R. G., and B. S. Hutchinson. 1987. Establishing information centers in developing countries: library technical assistance in Egypt, the Gulf States, Mauritania, Niger, and North Yemen. Presented at Annual conference, Association for Arid Lands Studies. El Paso, TX. 22-25 Apr. 25 pp.

Foster, K. E., and R. G. Varady. 1987. A regional center for new crops and agrisystems for drylands in Mexico. Paper presented (by Varady) at the Symposium on Strategies for Classification and Management of Native Vegetation for Food Production in Arid Zones. Sponsored by the U.S. Forest Service, Secretaría Agricultura y Recursos Hidráulicos, Government of Mexico, and Instituto Nacional de Investigaciones Forestales y Agropecuarias, Government of Mexico. Tucson, AZ. 15 Oct. 12 pp.

Varady, R. G. 1986. Land Use and Environmental Change in the Gangetic Plain: 19th Century Human Activity in the Banaras Region. Presented at 25th annual meeting of the Southeast Conference of the Association for Asian Studies. Raleigh, NC. 18 Jan. 35 pp.

SCHOLARLY PRESENTATIONS / Conferences (cont.)

Varady, R. G. 1986. The U.S.-Mexico Conference on Border Smelter Emissions: A Review. Border Natural Resources Conf. hosted by Governor's Commission on Arizona Envir. Rio Rico, AZ. 1 May.

Varady, R. G. 1985. Air Pollution in an Arid Environment: The Effects of Copper Smelting on the U.S.-Mexico Border Region. Presented at International conference, "Arid Lands: Today and Tomorrow." Tucson, AZ. 24 Oct. 23 pp.

Varady, R. G. 1985. Infrastructure and Environment: Speeding Deliveries Through a Fragile Landscape. Presented at public humanities program, "Desert Dialogue." Tucson, AZ. 6 Nov.

Varady, R. G. 1985. Harvesting Natural Resources: A Century of Mining and Lumbering [in the Southwest]. Public humanities program, "Desert Dialogue." Tucson, AZ. 9 Oct.

Varady, R. G. 1978. The Banjaras of North India: The Development of Their Role as Transporters. Paper presented at the Western Conference, Association for Asian Studies. Tucson, AZ. 14 Oct.

Varady, R. G. 1976. A Social History of Road Transport in North India Before 1800. Paper presented at the Western Conference, Association for Asian Studies. Flagstaff, AZ. 8 Oct.

OTHER PRESENTATIONS and PARTICIPATION

Moderator, Session, "Water security and global-change adaptation: bridging science and policy." XVI World Water Congress. Cancún, MX. 31 May 2017.

Moderator, Panel, “Water Sustainability Challenges for the Americas and Role of Science Diplomacy.” Conference, “Global Challenges: Science Diplomacy. . . .” Tucson. 24 Feb. 2017.

Member, Organizing Committee, conference, “Global Challenges: Science Diplomacy and Policy with Focus on the Americas. Tucson. 22-24 Feb. 2017.

Member, Closing high-level panel: “Turning the tide? How can scientific knowledge guide SDG policy making at different scale?” 2016 Budapest Water Summit. Budapest. 29 Nov. 2016.

Member, International Program Committee, 2016 Budapest Water Summit. Budapest. 28-30 Nov. 2016.

Moderator, Session on “Traditional Knowledge and Water Scarcity in Arid Lands,” at ITKI-UNESCO-City of Gastronomy conference, “Food and Water in Arid Lands: Dialogues across Contemporary and Traditional Knowledge.” Tucson. 4-5 Nov. 2016.

Member, Organizing Committee, and session co-chair, “Water, Energy and Food.” 2nd SWAN (Sustainable Water ActioN) International Conference “Open Knowledge: Bridging Perspectives to Address Water Challenges.” Tucson. 16-17 Feb. 2016.

Chair, Session on “Managing Water Demand and Trade-offs for Multiple Uses.” At “Water, Energy and Climate Conference 2014,” organized by International Water Association. Mexico City, Mex. 23 May.

Moderator, High-level Panel, “Opening high-level statements, and Cooperation—the key to peaceful water sharing.” And co-chair, Working Group, “Preparing recipes for water cooperation.” Closing Ceremony, 2013 International Year of Water Cooperation. Mexico City. 5-6 Dec.

Member, International Program Committee and Drafting Committee, 2013 Budapest Water Summit. Budapest. 8-11 Oct. 2013.

Member, High-level Panel, “How to govern water wisely with SMART SDGs (Sustainable Development Goals)?” 2013 Budapest Water Summit. Budapest. 10 Oct. 2013.

Moderator, Session, “Water Security Policies.” Univ. of Arizona Water Resources Research Center conference, “Water Security from the Ground Up.” Tucson, AZ. 5 Mar. 2012.

OTHER PRESENTATIONS and PARTICIPATION (cont.)

Moderator, Session, “Information collection for a subregional overview—governance of transboundary groundwaters in the EECCA (Eastern Europe, Caucasus, and Central Asia).” UN Economic Commission for Europe (UNECE) Capacity for Water Cooperation Workshop on Legal, Institutional and Technical Aspects of Managing Transboundary Groundwaters. Almaty, Kazakhstan, 29 May 2012.

Member, Permanent Consultation Mechanism, GEF Groundwater Governance Project, “A global framework for country action.” Partnersip of GEF, FAO, UNESCO, World Bank, IAH. 2011-14. Participated in first regional consultation in Montevideo, Uruguay. 18-20 April 2012.

International Scientific Committee, International Conference on Traditional Knowledge for Water Resources Management. UNESCO International Hydrological Programme and International Centre on Qanats and Historic Hydraulic Structures (ICQHS). Yazd, Iran. 21–23 Feb. 2012.

Moderator, Session, “Governance and Management of Transboundary Waters.” XIVth International Water Resources Association (IWRA) World Water Congress. Porto de Galinhas, Brazil. 28 Sept. 2011.

Introduction to the state of groundwater governance and prospects for a common vision. Inception Meeting, GEF Project on “Groundwater Governance” (FAO, GEF IW, IAH, UNESCO-IHP, WB). UNESCO Headquarters, Paris, France. 6-7 Sept. 2011.

Groundwater Policy and Governance: Ideas for a White Paper. Presented at GEF Project on “Groundwater Governance,” First Experts Meeting. UNESCO IHP. Paris, France. 29 April 2011.

Ideas for ISARM's Vision for Good Policies and Governance. Presented at ISARM Experts Meeting "Lessons Learnt and Ways Forward." UNESCO IHP. Paris, France. 28 April 2011.

General Rapporteur and member, Scientific Advisory Committee, ISARM (Internationally Shared [Transboundary] Aquifer Resources Management). Paris, France. 6-8 Dec. 2010.

Participant in special workshop, "Rewriting water history, reconstructing water politics, exploring water institutions in Israel/Palestine." Organized by J. Trottier, French Research Centre in Jerusalem (CFRJ). Jerusalem, Israel. 28-29 Nov. 2010.

Chair, Session, "Transboundary Water Governance and Plurality of Rights, at Intl. Symposium, Environment, Regions & Strategic Resources Governance Models for Rights-Based Perspectives. Consortium for Comparative Research on Regional Integration & Social Cohesion (RISC). Lille, France. 7 July 2010.

Scientific Committee, International Symposium, Environment, Regions and Strategic Resources Governance Models for Rights-Based Perspectives. Consortium for Comparative Research on Regional Integration and Social Cohesion (RISC). Lille, France. 5-7 July 2010.

Discussant, Session, "The role of technoscience in constructing scarcity and the role of scarcity in constructing political and regulatory frameworks in the Middle East." Water History Conference of the International Water History Association. Delft, Neth. 16-19 June 2010.

Chair, Double session, "The history of water in Israel/Palestine in the last 100 years: a beginning." Water History Conference of the International Water History Association. Delft, Neth. 16-19 June 2010.

Host and coordinator, with C. A. Scott, A. Browning-Aiken, and K. J. Ormerod. Water Reuse and Growth Workshop (in assoc. with 14th Annual Water Reuse & Desal. Research Conf.), Tampa, FL, 26 May 2010.

Organizing Committee, 3rd Workshop for Institutions and Actors about Climate Variability and Change In Western North America. NOAA and Inter-American Institute for Global Change Research. Puerto Peñasco, Sonora, Mex. 2-3 Oct. 2009.

Organizing Committee, "Arizona-Israeli-Palestinian Water Management and Policy Workshop: Economic, Environmental, and Community Implications of Expanding Reuse and Desalination for Future Water Supplies." Tucson, AZ. 31 Aug. - 2 Sept. 2009.

OTHER PRESENTATIONS and PARTICIPATION (cont.)

Scientific Committee, "Environment, Regions and Strategic Resources Governance Models for Rights-Based Perspectives." RISC (Regional Integ. and Social Cohesion) Consortium. Lille, France. 5-7 July 2010.

International Preparation Committee, First World Congress of Environmental History. International Consortium of Environmental History Organizations. Copenhagen, Denmark. 4-8 Aug. 2009.

Organizing Committee, 2nd Workshop for Institutions and Actors about Climate Variability and Change In Western North America. Inter-American Institute for Global Change Research and NOAA. Jiutepec, Morelos, Mex. 22 July 2009.

Adviser and consultant to Israeli-Palestinian Science Organization project on Israel-Palestine water history, at The Hebrew University (Israel) and Al-Quds University (Palestine). 23-25 Mar. 2009.

International Scientific Committee, "Water, Ecosystems and Sustainable Development in Arid and Semi-Arid Zones" (WATARID-2). Cosponsored by University of Tehran, Ecole Pratique des Hautes Etudes/Sorbonne & Centre National de Recherche Scientifique (France), and University of Xinjiang (China). Tehran, Iran. 4-6 May 2009 (did not attend).

Session co-chair, "Water and History: Understanding the Water Cultures of Past Civilizations and Deriving Lessons for the Present," Fifth World Water Forum. Istanbul, Turkey. 20 Mar. 2009.

Session co-chair, "Water and Cultural Diversity," Fifth World Water Forum. Istanbul. 18 Mar. 2009.

Resource person and lecturer, "Training session on water issues for environmental journalists from developing countries." Co-spons. by UNESCO, Fifth World Water Forum. Istanbul. 15-16 Mar. 2009.

Member, panel on "Challenges posed by climate change and drought and their impacts on water availability and society in North America. Workshop on Climate-Related Water Constraints and Their Implications for Relations Across North American Boundaries. Mexico City, D.F. 5-6 Mar. 2009.

Organizing Committee, "Stakeholder Workshop: Information Flows and Policy: Use of Climate Diagnostics and Cyclone Prediction for Adaptive Water-Resources Management Under Climatic Uncertainty in Western North America." Inter-American Institute for Global Change Research. Hermosillo, Mex. 7 Nov. 2008.

Scientific Steering Committee, Third International Conference on Managing Shared Aquifer Resources in Africa, sponsored by UNESCO and the ISARM (Internationally Shared [Transboundary] Aquifer Resources Management Project. Tripoli, Libya. 25-27 May 2008 (did not

Convener and organizer, Symposium on Water History of the Southwestern United States. Organized for the International Water History Association. University of Arizona. 19 Mar. 2008.

Program Committee, Fifth Conference of the Intl Water History Assoc. Tampere, Finland. 13-17 June 2007.

Organizing Committee, Center for Research on the Changing Earth System (CRCES) Workshop, "Societal Impacts of Decadal Climate Variability in the United States." Cosponsored by NSF, NASA, NOAA, USDA. Waikoloa, Hawaii. 26-27 Apr. 2007.

One of 9 participants in planning workshop to prepare a history of water in Israel and Palestine, "Transboundary Water Conflicts in the Middle East: From a Common History to a Common Thinking on Conflict Resolution," convened by Regional Government of Umbria and City Council of Perugia, in conjunction with the Israeli Palestinian Science Organization, Italian National Research Council, Italian UNESCO/IHP National Committee. Perugia, Italy. 4-5 Dec. 2006.

International Scientific Committee, "Water, Ecosystems and Sustainable Development in Arid and Semi-Arid Zones." Cosponsored by the University of Xinjiang (China), Ecole Pratique des Hautes Etudes/Sorbonne (France), and University of Tehran (Iran). Urumqi, Xinjiang. 9-15 Oct. 2006.

Organizing Committee, U.S.-Mexico Workshop on Monsoon Region Climate Applications. Sponsored by the NOAA Earth System Research Laboratory. Guaymas, Mexico. 8-12 May 2006.

OTHER PRESENTATIONS and PARTICIPATION (cont.)

Program Chair, Fourth Conference of the International Water History Assoc. Paris, France. 1-3 Dec. 2005.

Organizing committee, Fourth National Environmental Conflict Resolution Conference, sponsored by U.S. Institute for Environmental Conflict Resolution. Tucson, AZ. 24-26 May 2005.

Organizing committee, Second International Symposium on Transboundary Waters Management. Tucson, AZ. 16-19 Nov. 2004.

Presenter, "The HELP Initiative: a report." At GEWEX Water Resources Application Project workshop. Geesthacht, Germany. 22 Sept. 2003.

Presenter, "The HELP Initiative: a report." At GEWEX Water Resources Application Project workshop. Columbia University, NY. 9 Sept. 2002.

Panelist, "Reforming the North American Development Bank (NADBank) and the Border Environment Cooperation (BECC)," public forum organized by U.S. Environmental Protection Agency (U.S.EPA). Tucson, AZ. 11 Oct. 2001.

Co-organizer of Simposio sobre Problemática Ambiental en Cuencas de México y Estados Unidos de América (Symposium on Environmental Issues in Basins in Mexico and the U.S.), sponsored by Mexico's Comisión Nacional del Agua (National Water Commission). Guadalajara, Mexico. 9 Nov. 2001.

Organizer, Ford Foundation/U.S. EPA/U.S. DOI/UC MEXUS-sponsored symposium on Colorado River Delta issues. Riverside, CA. Sept.-Oct. 2000.

Organizing Committee, for conference, "Alternative Dispute Resolution and Natural Resources: Building Consensus and Resolving Conflicts in the Twenty-First Century," organized by the U.S. Institute for Environmental Conflict Resolution. Tucson, AZ. 16-19 May 2000.

Session Chair, "Decisionmakers/Stakeholders," at Second Aurora Partnership Conference. Fayetteville, AR. 28 Sept. 1999.

Commentator with Stephen Cornell, "Decision Support Systems, Social-Science Applications, and Public Policy," at inaugural meeting of the Aurora Partnership. Jackson Hole, WY. 30 Sept. 1998.

Organizing Committee, "Native American Health and Welfare in an Age of New Federalism," conference organized by the Morris K. Udall Foundation, the Henry J. Kaiser Family Foundation, and the Udall Center for Studies in Public Policy. Tucson, AZ. 22-24 Oct. 1998.

Steering Committee, "United States/Mexico Conference on Hazardous Waste Management and Technologies," hosted by the Center for Toxicology Superfund Basic Research Program at The University of Arizona. Tucson, AZ. 9-11 Aug. 1998.

Discussion leader for "Global Warming: Local Solutions," a national teleconference and local town-hall meeting. Tucson, AZ. 22 Apr. 1998.

Participant in U.S. EPA course, "Principles of Environmental Compliance and Enforcement." Organized by Western States Project. San Carlos, Sonora, Mexico. 10-12 Feb. 1998.

Presenter, "Public Access to Water-related Information in the U.S.-Mexico Border Region: The Border Environment Cooperation Commission (BECC) and BECCnet, an Internet-based Discussion Group," presented at the "Seminar on Cross-Border Data," San Diego Dialogue. 14 Nov. 1997.

Co-organizer, discussant at symposium, "Coping with Scarcity in the Rio Grande/Río Bravo Drainage Basin: Lessons to be Learned from the Droughts of 1993-1996." Cuernavaca, Mexico. 10-12 Nov. 1997.

Organizing Committee, "7th National Conference of the Society of Environmental Journalists," co-sponsored by the Morris K. Udall Foundation and the Udall Center. Tucson, AZ. 2-5 Oct. 1997.

Chair, working group on environment, Border PACT (Border Partners in Action—U.S.-Mexico Collaborative Network of Borderlands Higher Education Institutions) Inaugural Conf. San Diego, CA. 28 Aug. 1997.

OTHER PRESENTATIONS and PARTICIPATION (cont.)

Organizing Committee for "Workshop on Environmental Conflict Resolution in Indian Country." Hosted by Univ. of Arizona American Indian Studies Programs and College of Law. Tucson, AZ. Jan. 1997.

Panel Co-moderator and Organizer, "Community Access to Information on Environmental Issues in the U.S.-Mexico Border Region." Presented at the 7th annual "Foro Transfronterizo de Bibliotecas" ("Transboundary Forum on Libraries"). Ciudad Juárez, Chihuahua, Mexico. 22 Feb. 1997.

Conference Planning Committee, "The Future of Grasslands: Identifying Issues, Seeking Solutions." Tucson, AZ. 9-13 Oct. 1996.

Presenter, "The North American Free Trade Agreement and the Evolution of the Border Environment Cooperation Commission." National Academy of Sciences, Institute of Medicine, Committee on Environmental Justice at "Environmental Justice and Environmental Occupational and Clinical Issues of Border Communities." Tucson, AZ. 6 Dec. 1996.

Panel Moderator, "Needs for and Potential Applications of GIS in the Border Region." At conference, "Using Geographic Information Systems to Link Institutions and Inform Communities in the Mexico-U.S. Border Region," organized by the Transboundary Resource Inventory Project (TRIP). Monterrey, Nuevo León, Mexico. 31 May 1996.

Closing Commentator, 'Sustainability' as a Predictor of Successful Innovation: A Historical Perspective" at "Understanding Sustainable Development and Using Alternative Technologies," sponsored by the Border Infrastructure Finance Office, Arizona Department of Commerce. Tucson, AZ. 21 May 1996.

Conference Co-organizer, "Environmental Health Issues in the U.S.-Mexico Border Region: Public Perception, the Knowledge Base, and Public Policy." Cosponsored by the Morris K. Udall Foundation, the Udall Center, and the Society of Environmental Journalists. Also moderated session, "Environmental Health Issues Related to Biological Exposure and Contamination." Tucson, AZ. 29-30 Mar. 1996.

Symposium Co-organizer, "Toward Sustainability: The State of Research, Institutions, and Information on the U.S.-Mexico Border Environment." Part of Ford Foundation-supported series, "The U.S.-Mexico Border: An International Region Under Stress." Also moderated session, "Socio-Institutional Sustainability Along the Border: Nongovernmental NGOs." Guaymas, Sonora, Mexico. 1-3 Mar. 1996.

Presenter with Helen Ingram, "Post-NAFTA Opportunities and Challenges for the Environment: The First Year of the Border Environment Cooperation Commission." At Feb. meeting of the Tucson Committee on Foreign Relations. Tucson, AZ. 15 Feb. 1996.

Co-organizer and Co-moderator, "Sustainable Development Workshop for the Border Environment Cooperation Commission (BECC)." Supported by the C. S. Mott Foundation. Nogales, Sonora. 17 Jan. 1996.

Presenter with Christopher Helms. "The New Federal Mandate for Environmental Conflict Resolution at the University of Arizona: A Collaboration Between the Morris K. Udall Foundation & the Udall Center for Studies in Public Policy." Meeting of [Southern Arizona] Environmental Dispute Resolution Group, "Environmental Dispute Resolution: The University and the Community." Tucson, AZ. 13 Jan. 1996.

Symposium Co-organizer, "Potential New Stresses to the Border Environment: Electoral Politics in the U.S. and Economic Instability in Mexico." Also co-moderated session, "Research, Information, and Influence: New Ways to Shape Border Environmental Policy. Part of Ford Foundation-supported series, "The U.S.-Mexico Border: An International Region Under Stress." Bisbee, AZ. 26-28 Feb. 1995.

Presenter in session, "Perspective on Bilateral and Trilateral Funding Opportunities," at WICHE (Western Interstate Comm. on Higher Education)/AMPEI Leadership Seminar. Ensenada, Baja Cal. 15 May 1994.

Co-organizer, "Tri-National Summer Institute on Innovation, Competitiveness and Sustainability," directed by Simon Fraser University (Canada), funded by Canadian Social Sciences and Humanities Research Council, U.S. National Science Foundation, and Mexico's national science organization, CONACYT. Whistler, BC, Canada. 14-20 Aug. 1994.

OTHER PRESENTATIONS and PARTICIPATION (cont.)

Panel Co-facilitator, "Creating Better Linkages: Information Exchange in an International Context," at "Bridging Borders: A Cross-Border Exchange," a conference sponsored by the International Sonoran Desert Alliance. Puerto Peñasco, Sonora, Mexico. 15 Jan. 1994.

Presenter with Helen Ingram, "Borders: Empowering Grassroots Linkages." At "Bridging Borders: A Cross-Border Exchange," a conference sponsored by the International Sonoran Desert Alliance. Puerto Peñasco, Sonora, Mexico. 14 Jan. 1994.

Symposium Co-organizer of Ford Foundation-supported series, "The U.S.-Mexico Border: An International Region Under Stress." Santa Fe, NM. 19-21 Nov. 1993.

Panel chair, "Arizona's Environmental History," at "The Second Opening of the West: Ideas of Nature in Arizona," sponsored by Arizona Humanities Council. Prescott, AZ. 13 Nov. 1993.

Conference Co-organizer, "Inventando Las Fronteras/Inventing the Borderlands," supported by Ford Foundation. Tucson, AZ. 28-30 Apr. 1993.

Lecturer on "U.S.-Mexico Free Trade and Environment," in "Great Decisions Program," at Catalina Methodist Church. Tucson, AZ. 15 Feb. 1993.

Lecturer on "The Udall Center's Work on Transboundary Environmental Policy," to Senior Citizens Interest Group, Grace St. Paul's Episcopal Church. Tucson, AZ. 1 Oct. 1992.

Presenter with Helen Ingram, "Borderlands Universities and the Collection and Dissemination of Knowledge. At "Health and the Environment: Risk and Responsibility--An Interactive Workshop for Improving Communications in Ambos Nogales." Nogales, AZ. 31 Mar. 1992.

Presenter on, "Environmental Conflict and the World's New International Borders." At closing plenary session of "The Sonoran Peoples' Summit" conference. Tucson, AZ. 25 Jan. 1992.

Presenter with Helen Ingram, "The Sonoran Pimería Alta: Shared Environmental Problems and Challenges." At conference, "Five Hundred Years After the Meeting of Two Worlds--A Cultural Legacy in Pimería Alta." Nogales, Sonora, Mexico. 25 Jan. 1992.

Panel Chair, "The North American Free Trade Agreement--Southern Arizona perspectives," at public forum organized by Arizona Congressman J. Kolbe, "At the Threshold of Opportunity: A Conference on the North American Free Trade Agreement." Bisbee, AZ. 29 Jun. 1991.

Lecturer on "The Activities of the Udall Center," to the Old Pueblo Rotary Club. Tucson, AZ. 25 Mar. 1991.

Interviewee on Community Access Cable TV Program, "Center Stage," on the Udall Center and the U.S.-Mexico Border. Tucson, AZ. 7 Nov. 1990.

Varady, R. G. 1984. The 1984 Religious Disturbances in the Punjab and Gandhi's Legacy. Lecture sponsored by the Arizona Humanities Council. Phoenix, AZ. 14 Jun.

Varady, R. G. 1983. Historical Perspectives on the Film, "Gandhi." Lecture on "Gandhi," sponsored by the Arizona Humanities Council and Tucson Public Library. Tucson, AZ. 17 Apr.

Varady, R. G. 1983. Food Production and Famine Policy in Colonial India. Lecture sponsored by the Arizona Humanities Council. Tucson, AZ. 27 Feb.

Varady, R. G., and Q. G. Priest. 1981. Difficulties of Establishing Independent Scholarly Organizations. Presented at annual meeting, American Historical Association. Los Angeles, CA. 29 Dec.

Varady, R. G. 1980. Politics in India and Pakistan: Electoral Democracy vs. Military Dictatorship in an Islamic Republic. Lecture sponsored by the Arizona Humanities Council. Green Valley, AZ. 13 Nov.

GRANTS and CONTRACTS

Private Foundations

"Lloyd's Register Educational Trust International Water Security Network." Subcontract from Univ. of the West of England, award by Lloyd's Register Foundation. \$1,158,173 (Sept. 2013-Aug. 2018). PI, 75 pct.

Research exchanges between University of Arizona scientists and French scientists. Partner University Fund (PUF). \$234,000 (half to the UA, half to French institutions). June 2009 to May 2011. Co-investigator, 10 pct.

"Water Reuse to Offset Growth-Driven Water Scarcity in the Southwest: From Supply Augmentation to Substitution." WaterReuse Foundation. \$74,800. 1 year (2009-2010). Co-PI with C. A. Scott and A. Browning-Aiken, 25 pct.

Travel support to attend workshop, "Impacts of Mega-Conferences on Global Water Development and Management," Bangkok, Thailand (Feb. 2005). Sasakawa Peace Foundation, via Third World Centre for Water Management. \$1,200.

Support for environmental facilitation services. International Association of Fish and Wildlife Agencies. \$62,900. 1 year (2000-01). Co-PI with M. Brogden, 10 pct.

Support for “Arizona Common Ground Roundtable” ranching-conflict dialogue. Arizona Community Foundation. \$38,800. 1 year (2000-01). Co-PI with M. Brogden, 15 pct.

Support for preparation of handbook on open spaces. Western Governors' Association. \$2,500. 1 year (2000-01). Co-PI with M. Brogden, 15 pct.

Support for preparation of handbook on open spaces. Trust for Public Land. \$2,500. 1 year (2000-01). Co-PI with M. Brogden, 15 pct.

Support for “Arizona Common Ground Roundtable” ranching-conflict dialogue. Arizona Nature Conservancy. \$13,000. 1 year (2000-01). Co-PI with M. Brogden, 15 pct.

Support for “Arizona Common Ground Roundtable” ranching-conflict dialogue. University of Arizona Foundation. \$11,400. 2 years (1999-2001). Co-PI with M. Brogden, 15 pct.

“Community Outreach and Capacity Development in the Upper San Pedro River Basin, Arizona and Sonora.” Ford Foundation. \$50,000. 2 years (1998-2000). Co-PI with M. A. Moote and R. Merideth, 15 pct.

“Public Input Environmental Decisionmaking in North America in the Post-NAFTA Era,” Ford Foundation. \$100,050. 2 years (1998-2000). Co-PI with R. Merideth, 60 pct.

Support for “Native American Health and Welfare in an Age of New Federalism” conference. Henry J. Kaiser Family Foundation. \$30,000. (Oct. 1998) Co-PI with S. Cornell and R. Merideth, 15 pct.

Evaluation of the WaterWorks Program for The Pew Charitable Trusts. \$57,000 (Oct. 1997-Jun. 1998). PI, 100 pct.

“Joining Knowledge and Action: Resolving U.S.-Mexico Transboundary Environmental Problems.” Ford Foundation. \$125,000. 3 years (1996-99). Co-PI with H. Ingram and A. Utton, 70 pct.

“Democratic Institutions, BECC [Border Environment Cooperation Commission], and Environmental Sustainability in the [U.S.-Mexico] Border Region.” Charles Stewart Mott Foundation. \$185,000. (Nov. 1994-Oct. 1996). Co-PI with H. Ingram, 80 pct.

Support for series of three coordinating conferences on the border region under stress. Ford Foundation. \$116,000 (Oct. 1992 to Jun. 1996). Co-PI with H. Ingram and A. Utton, 40 pct.

“Fortifying Transnational Linkages Along the U.S.-Mexico Border: Information-sharing and Environmental Policy.” Ford Foundation. \$300,000 (May 1994-Apr. 1997). Co-PI with H. Ingram, 75 pct.

“Water and the San Xavier District of the Tohono O’odham Nation.” Tides Foundation 777 Fund. \$10,000 (May 1993-Apr. 1994). Co-PI with H. Ingram and C. Brickey, 25 pct.

GRANTS and CONTRACTS / Private Foundations (cont.)

Support for conference, “Inventando Las Fronteras/Inventing the Borderlands,” to explore changing perceptions of the U.S.-Mexico border. Ford Foundation/Mexico City. \$27,000 (Mar. 1993 to Mar. 1994). Additional funding: University of Arizona, \$10,000, and Arizona Humanities Council, \$2,000. Co-PI with H. Ingram, M. Wilder, J. Wilder, 40 pct. Tucson. 28-30 Apr. 1993.

Handbook on strategies and problem-solving techniques for the U.S.-Mexico border environment. Ford Foundation. \$110,000 (Aug. 1992 to Jan. 1994). Co-PI with H. Ingram, 50 pct.

Support for conference to help set U.S.-Mexico border research agenda for Ford Foundation. Ford Foundation. \$31,000 (Sept. 1991 to Feb. 1992). Co-PI with H. Ingram, 60 pct. Guaymas, Sonora, Mexico.

“U.S.-Mexico Transboundary Water Resources Management: Bilateral Issues, Policies, and Strategies in the Nogales Area.” Ford Foundation. \$125,000. (Sept. 1989 to Oct. 1990). Follow-on, \$225,000 (20 months from Dec. 1990). Co-PI with H. Ingram and S. Ince, 30 pct.

International Organizations

Support for travel to water security inception meeting in Paris (Feb. 2015). UNESCO-IHP. \$1000.

Evaluation of World Water Assessment Programme and World Water Development Report. (Dec. 2014-June 2015). UNESCO. \$60,000.

Support for travel to RALCEA workshop in Panama City. (Nov. 2014). Joint Research Centre/European Commission. \$1,500.

“Innovative Science and Influential Policy Dialogues for Water Security in the Arid Americas.” Inter-American Institute for Global Change Research. \$744,274 (Dec. 2012-Dec. 2018). Co-PI (C. Scott and F. Meza, joint PIs).

Support for travel to workshop in Mexico City, “Water-Energy-Food Nexus – A strategy for future water security?” (May 2014). GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit). \$1,200.

Support for travel to Mexico City for “Closing Ceremony, 2013 International Year of Water Cooperation” and CONAGUA forum (Dec. 2013). UNESCO/IHP and CONAGUA. \$2,000.

Support for travel to regional consultation meeting in The Hague, Netherlands (Mar. 2013), Amman, Jordan (Oct. 2012), and Montevideo, Uruguay (Apr. 2012) for GEF-FAO Global Groundwater Governance project. UNESCO/IHP. \$7,500.

Support for travel to IAI Principal Investigators’ meeting in Buenos Aires, Argentina. Inter-American Institute for Global Change Research. \$2,400 (Mar. 2013).

Support for travel to UNECE wkshp. in Almaty, Kazakhstan. Finnish Embassy, Kazakhstan. \$2,500 (May 2012).

“Towards an integrated assessment of water security under global change in the Americas: Exploring synergies and expanding current IAI networks.” Inter-American Institute for Global Change Research. \$304,000 (Mar. 2012-Dec. 2014). Co-PI (C. Scott and F. Meza, PIs).

Support for consultancy travel to meetings of UNESCO’s Internationally Shared Aquifer Research Management (ISARM) program (UNESCO/IHP). \$8,000 (2010-2011).

Support for International Joint Unit on Water, Environment and Public Policy (UMI 3157). French National Science Research Center (CNRS). \$95,000 (Jan 2008 – Mar. 2011).

Phase 2, “Information Flows and Policy: Use of Climate Diagnostics and Cyclone Prediction for Adaptive Water-Resources Management Under Climatic Uncertainty in Western North America.” Inter-Amer. Inst. for Global Change Research, Small Grants Prog. for the Human Dimensions. \$119,700 (Sept. 2010-June 2011).

Support for travel to meetings as member of Scientific Council, CNRS. \$7,000. (2010-11).

Travel support for Synthesis Meeting of Principal Investigators’ of the Inter-American Institute for Global Change Research (IAI, Buenos Aires, Argentina). \$2,500 (5-6 Aug. 2010).

GRANTS and CONTRACTS / International Organizations (cont.)

Support for “Arizona-Israeli-Palestinian Water Management and Policy Workshop: Economic, Environmental, and Community Implications of Expanding Reuse and Desalination for Future Water Supplies.” (1) U.S.-Israel Binational Science Foundation. \$25,000 (July 2009 – June 2010). Investigator, co-PIs S. Megdal and I. Fischhendler. (2) UNESCO International Hydrological Programme. \$5,000 (Aug.-Dec. 2009). PI, 100 pct.

Travel support for Joint Principal Investigators’ Meeting of the Inter-American Institute for Global Change Research (IAI, Montevideo, Uruguay). \$2,000 (24-25 June 2009).

Travel support for advising and consulting on Israel-Palestine water history project. Israeli-Palestinian Science Organization (Jerusalem, Israel). \$1,700 (Mar. 2009).

Travel support for keynote presentation at Advancing the Science of Limnology and Oceanography (ASLO) biennial Aquatic Sciences Meeting (Nice, France). ASLO. \$2,200 (Jan. 2009).

Travel support to participate in First, Second, and Third Short Courses on World History of Water Management. UNESCO-IHE Institute for Water Education. Delft, Netherlands. \$5,100 (Sept. 2009, 2008, 2007).

Travel support for participation in Second Isla Victoria Workshop, "The Future of Water." Universidad Nacional de San Martín, Argentina. \$3,000 (May 2008).

Support for visiting scholar appointment and conference keynote address, North-West University/Vaal Triangle Campus. South Africa. \$3,500 (April 2008).

Travel support for Joint Principal Investigators' Meeting of the Inter-American Institute for Global Change Research (IAI, Panama City, Panama). \$2,000 (21-24 February 2008).

"Information Flows and Policy: Use of Climate Diagnostics and Cyclone Prediction for Adaptive Water-Resources Management Under Climatic Uncertainty in Western North America," Inter-American Institute for Global Change Research, Small Grants Program for the Human Dimensions. \$147,300 (Sept. 2007-Aug. 2009).

Travel support to participate in editorial meeting for UNESCO/IWHA (International Water History Association) series on Water and Civilization in Delft, Netherlands. UNESCO Intl. Hydrological Prog.. \$1,800 (Nov. 2006).

Travel support to participate in workshop, "Transboundary Water Conflicts in the Middle East: From a Common History to a Common Thinking on Conflict Resolution," convened by Regional Government of Umbria and City Council of Perugia, in conjunction with the Italian National Research Council, Italian UNESCO/IHP National Committee. \$2,000 (Dec. 2006).

Travel support to participate in meeting of publications committee for UNESCO/IWHA series on Water and Civilization in Paris. UNESCO International Hydrological Programme. \$1,800 (May 2006).

Travel support to attend Fourth Conference of International Water History Association (IWHA) in Paris. UNESCO International Hydrological Programme. \$1,500 (Dec. 2005).

Travel support to attend organizing meeting for HELP Initiative session at 4th World Water Forum in Paris. UNESCO Intl. Hydrological Prog., Regional Science Office for Latin Amer. and Caribbean. \$1000 (Aug. 2005).

Travel support to attend executive board meetings of International Water History Association (IWHA) London, Nov. 2004, and Paris, June 2005. IWHA. \$2,500.

Workshop on climate vulnerability index, Guayaquil, Ecuador. UNESCO International Hydrological Programme. \$15,000 (Feb. 2005-July 2005). PI, 100 pct.

Binational dialogue on water and climate in the San Pedro River basin of Mexico. Dialogue on Water and Climate (DWC), Govt. of The Netherlands. \$72,000 (Apr. 2002-Mar. 2003). Co-PI with R. W. Merideth, B. Morehouse, and D. Goodrich, 75 pct.

Participation as UNESCO representative at Fourth Inter-American Dialogue on Water Management. Foz da Iguaçu, Brazil. UNESCO. \$2,000 (Aug.-Sept. 2001).

GRANTS and CONTRACTS / International Organizations (cont.)

Participation as HELP (Hydrology for Life, Environment and Policy) representative at annual meeting of Water Resources Applications Project in New York. World Meteorological Program (WMO). \$800 (Aug. 2000). A Community-based Public Participation Action Plan in the Upper San Pedro River Basin, Arizona-Sonora. [U.S.-Mexico-Canada] Commission for Environmental Cooperation. \$70,000 (Mar. 1998-June 2001). Co-PI with M. A. Moote, 25 pct.

"Master Plan for Alleviating Environmental Degradation in the Lake Chad Basin." United Nations Environment Programme (UNEP). \$38,000 (Jan. to Dec. 1990). Co-PI with K. E. Foster, 100 pct.

"Diagnostic Study on Desertification and Desertification Control in the Lake Chad Basin." U.N. Development Program (UNDP) for U.N. Sudano Sahelian Office and U.N. Environment Programme (UNSO and UNEP). \$71,400 (Apr. to Dec. 1989). Co-PI with K. E. Foster, PI, 100 pct.

Support for preparation of a world desertification bibliography. UNEP. \$19,500 (12 months from Mar. 1988). PI, 100 pct.

Support for assistance in management of information and documentation. Ministry of Planning, Republic of Niger \$62,000 (Jul. 1986 to Jan. 1987). PI, 100 pct.

Federal Agencies

Support for "Oct. 2016-Sept. 2017 Workplan" (through Mar. 2017). Cooperative agreement with Morris K. Udall Foundation. \$133,750. PI, 100 pct.

Support for "Oct. 2015-Sept. 2016 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$267,500. PI, 100 pct.

Support for "Oct. 2014-Sept. 2015 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$268,000. PI with S. Cornell, 50 pct.

"Improving Integrated Surface Water and Groundwater Management in the United States: Case Studies of Innovative Groundwater Governance Approaches," USGS 104B Program. \$1,500. Co-PI with A. Gerlak, S. B. Megdal, PI, 20 pct.

Support for "Oct. 2013-Sept. 2014 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$285,500. Co-PI with S. Cornell, 50 pct.

Support for "Oct. 2012-Sept. 2013 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$285,500. Co-PI with S. Cornell, 50 pct.

"Managing Demand and Rethinking Supply: Adaptation, Conservation, and Planning in the Drought-prone Southwestern United States and Northwest Mexico," NOAA Climate and Societal Interactions (CSI) Program. \$300,000 (Sept. 2011 – Aug. 2015). Co-PI, with M. Wilder, PI, and G. Garfin, co-PI.

Support for "Oct. 2011-Sept. 2012 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$327,500. Co-PI with S. Cornell, 50 pct.

Support for "Oct. 2010-Sept. 2011 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$330,000. Co-PI with S. Cornell, 50 pct.

"Arizona-Israeli-Palestinian Water Management and Policy Workshop: Economic, Environmental, and Community Implications of Expanding Reuse and Desalination for Future Water Supplies," (1) National Science Foundation. \$49,529 (July 2009 – June 2010). Co-PI with S. Megdal, 50 pct.

Graduate research assistant support for "Water Quality, Public Records Research, Survey of Health Effects in Ambos Nogales." USGS. \$22,000 (Mar. 2010 - Mar. 2011).

Support for "Oct. 2009-Sept. 2010 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$331,200. Co-PI with S. Cornell, 50 pct.

Grants and Contracts / Federal Agencies (cont.)

"Moving Forward: Adaptation and Resilience to Climate Change, Drought, and Water Demand in the Urbanizing Southwest and Northern Mexico," NOAA/SARP (Sector Application Research Program). \$286,931 (July 2008 – June 2010).

Support for "Oct. 2008-Sept. 2009 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$330,000. Co-PI with S. Cornell, 50 pct.

Support for "Oct. 2007-Sept. 2008 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$344,000. Co-PI with S. Cornell, 50 pct.

Support for "Oct. 2006-Sept. 2007 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$335,000. Co-PI with S. Cornell, 50 pct.

Support for convening binational meetings aimed at producing U.S.-Mexico border region climate-diagnostic product. National Oceanic and Atmospheric Administration (NOAA). \$6,000 (2006). With G. Garfin and A. Ray, 33 pct.

Support for "Oct. 2005-Sept. 2006 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$295,000. Co-PI with S. Cornell, 50 pct.

Support for HELP Initiative studies in Upper San Pedro River Basin (in U.S. and Mexico) and Washita River Catchment (Oklahoma). National Oceanic and Atmospheric Administration (NOAA) Human Dimensions Program and NOAA/NASA/GAPP Initiative. \$265,000 (2003-07). Lead PI, Co-PIs A. Browning-Aiken, D. Goodrich, B. Morehouse, and G. Garfin, 25 pct.

Support for "Oct. 2004-Sept. 2005 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$282,000. Co-PI with S. Cornell, 50 pct.

"Integrating Research and Education to Assist Watershed Initiatives: A Survey of Three Arizona Watershed organizations." USGS 104B Grant Program. \$12,500 (2003-04). Co-PI with J. E. De Steiguer and A. Browning-Aiken, 33 pct.

Support for "Oct. 2003-Sept. 2004 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$258,000. Co-PI with S. Cornell and R. Merideth, 33 pct.

Support for "Oct. 2002-Sept. 2003 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$250,000. Co-PI with S. Cornell and R. Merideth, 33 pct.

Support for "Oct. 2001-Sept. 2002 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$262,000. Co-PI with S. Cornell and R. Merideth, 33 pct.

Support for workshop on U.S.-Mexico tribal environmental issues (2002-03). U.S. Environmental Protection Agency. \$30,000. Co-PI with S. Cornell, R. Merideth, and J. Timeche, 10 pct.

Scoping studies for Upper San Pedro River Basin (in U.S. and Mexico) and Red River Catchment. National Oceanic & Atmospheric Administration (NOAA)-NOAA/NASA/GAPP Initiative. \$27,000 (2000-02). 100 pct.

Support for "Oct. 2000-Sept. 2001 Workplan." Cooperative agreement with Morris K. Udall Foundation. \$280,000. Co-PI with S. Cornell and R. Merideth, 33 pct.

Co-investigator, NSF grant to University of Arizona for Science and Technology Center for the Sustainability of Semi-arid Hydrology and Riparian Areas (SAHRA). Approx. \$50,000/year (estim. Udall Center portion of \$16 million grant, July 2000-June 2004). Principal Investigator, S. Sorooshian. 100 pct. of Udall Center effort.

Support for conference on Lower Colorado River/Colorado Delta. U.S. Environmental Protection Agency (EPA). \$32,500 (Apr. 2000-Mar. 2001), U.S. Dept. of the Interior. \$10,000 (Oct. 2000-Sept. 2001). 100 pct.

Grants and Contracts / Federal Agencies (cont.)

Support for San Pedro [River Basin] conference, "Divided Waters--Common Ground/Agua Dividas--Areas Comunes." U.S. Agricultural Research Service. \$27,000. Bureau of Land Management. \$2,500. U.S. Fish and Wildlife Service. \$15,000 (Aug. 1999-Mar. 2000). Co-PI with E. Glenn, 75 pct.

Support for "Addendum to FY2000 Annual Workplan." Cooperative agreement with Morris K. Udall Foundation. \$47,000. Co-PI with S. Cornell and R. Merideth, 33 pct.

Support for project, "Infrastructure to Develop a Human-Environment Regional Observatory (HERO)." National Science Foundation (via subcontract from Penn State University). \$87,000 for 5 years to Udall Center (total \$290,000 to University of Arizona, Aug. 2000-July 2005). Co-PI with Diana Liverman, Andrew Comrie, and Robert Merideth. 15 pct.

Support for "Oct. 1999-Sept. 2000 Annual Workplan." Cooperative agreement with Morris K. Udall Foundation. \$280,000. Co-PI with S. Cornell and R. Merideth. 33 pct.

Support for "Oct. 1998-Sept. 1999 Annual Workplan." Cooperative agreement with Morris K. Udall Foundation. \$279,000. Co-PI with S. Cornell and R. Merideth, 33 pct.

Support for "Jul. 1997-Sept. 1998 Annual Workplan." Cooperative agreement with Morris K. Udall Foundation. \$342,000. Co-PI with R. Merideth, 60 pct.

Support for "Jul. 1996-Jun. 1997 Annual Workplan." Morris K. Udall Foundation. \$272,000. Co-PI with R. Merideth, 60 pct.

Support for "Oct. 1995-Jun. 1996 (FY1996) Annual Workplan." Morris K. Udall Foundation. \$208,000. Co-PI with H. Ingram, 95 pct.

Support as one of six institutional partners in Trilateral (U.S., Mexico, Canada) Environmental Education Consortium. 1998-2000. Subcontractor to LBJ School of Public Affairs, University of Texas/Austin on grant from Program for North American Mobility in Higher Education. \$21,000. 3 years. PI, 100 pct.

Support for preparation of a Primer on Climate Change and Variability in the Southwest for Policymakers and Citizens. National Park Service. \$20,000 (2 years, 1997-99). Co-PI with R. Merideth, 10 pct.

Support for Southwest Regional Climate Change Symposium and Workshop. Cooperative Agreement with U.S. Geological Survey and Dept. of Interior. \$75,000. (Jun. 1997-Dec. 1997). Co-PI with R. Merideth, 25 pct

Support for literature review and catalog of domestic rubber-producing plants. U.S. Dept. of Agriculture, National Agric. Library. \$9,000 (Jul. 1988-Aug. 1989). Co-PI with K. E. Foster, 75 pct.

Support for preparation of third edition of international directory of arid lands research institutions. U.S. Man and the Biosphere Program, U.S. Agency for International Development, UNEP, Organization of American States, Environmental Research Laboratory. \$31,000. (Jan. 1987 to Sept. 1988). Co-PI with B. S. Hutchinson, 50 pct.

Support for indexing input to agricultural database (AGRICOLA). National Agricultural Library, U.S. Dept. of Agriculture. \$50,300 (FY88), \$27,100 (FY89). PI, 100 pct.

Support for technical assistance and backstopping in information management for Egyptian Ministry of Agriculture. USAID-funded Consortium for International Development. \$17,000 (two years, Mar. 1987 to Mar. 1989). PI, 100 pct.

Mauritania Agricultural Research (AGRES) II Project. Farming systems research and institution-building in the Senegal River Valley in Mauritania. Assistance provided to Centre National de Recherche Agronomique et de Développement [national agricultural research center]. U.S. Agency for International Development (USAID). Total project funding, \$3.1 million (5 years, to Aug. 1990) plus \$101,000 (1 year, from Aug. 1990). Served as PI at 100 pct. effort and managed approximately \$1.5 million from Jun. 1988 to Aug. 1990.

Establishment of agricultural documentation center for Ministry of Agriculture and Fisheries, Yemen Arab Republic. USAID-funded Consortium for Intl. Devel. \$400,000 (Jul. 1983 to Dec. 1986). PI, 100 pct.

Grants and Contracts / Federal Agencies (cont.)

Assessing and monitoring desertification in grazing systems: the Cholistan Desert, Pakistan. Research Devel. Award, Smithsonian Instit. \$13,000 (Mar. to Jul. 1985). Co-PI with C. F. Hutchinson, 60 pct.

Support for training program in computerized bibliographic database management and documentation for librarian from Niger. U.S. Agency for International Development, Niamey, Niger. \$6,000 (Jul. 1987 to Aug. 1987). PI, 100 pct.

Support for preparation of Environmental Profile of Guinea. U.S. Man and the Biosphere Program. \$6,000 (Jul. 1982 to Jan. 1983). Co-PI with C. F. Hutchinson, 100 pct.

State Agencies

Water and energy sustainability with rapid growth in the Arizona-Sonora border region. Arizona Water Institute. \$50,000 (Dec. 2007 to Nov. 2008). Co-PI with C. A. Scott and others, 10 pct.

Faculty Research Grant Development Incentive. "Coupled Water and Energy Demand in the Arizona-Sonora Border Region: Groundwater Pumping, Municipal Water Services, and Electrical Power Interactions." Arizona Water Institute. \$10,000 (May to Nov. 2007) Co-PI with C. A. Scott, 50 pct.

Design of Public Participation Plan for Oahu Water. University of Hawaii/Hawaii Department of Water Resources. \$10,500 (2000-01). Co-PI with M. Brogden and M. A. Moote, 10 pct.

Support for panel discussion and photo exhibit, "The Chinese of Barrio El Olla, Tucson." Arizona Humanities Council. \$1,500 (Jul. to Oct. 1986). Co-PI with Q. G. Priest, 25 pct.

Support for panel discussion of film, "Gandhi." \$500 (Apr. 1983). Arizona Humanities Council. PI, 100 pct.

Support for public lecture series for Tucson Public Library on Asian countries in crisis. Arizona Humanities Council. \$500 (Nov. 1980 to Jan. 1981). PI, 100 pct.

Support for public panel discussion series on historical dimensions of the 1979 crises in Afghanistan, Iran, and Pakistan. Arizona Humanities Council. \$1,000 (Mar. to Jun. 1980). PI, 100 pct.

Industry-Private Sector

Support for Aurora Partnership. ESRI, Inc. \$25,000 (June 1999 to June 2000). Co-PI with S. Cornell and R. Merideth, 15 pct. effort.

Consultation on binational water issues for City of Nogales (AZ) General Plan. The Planning Center, Tucson, AZ. \$6,000 (Apr. 1992 to Oct. 1992). PI, 100 pct.

Research report coordination and preparation for 58th Arizona Town Hall, "Preserving Arizona's Environmental Heritage." Arizona Town Hall and University of Arizona President's Office. \$24,000 (Mar. 1991 to Jan. 1992). PI, 100 pct.

Support for North American representation of Commonwealth Agriculture Bureaux, International (CABI). \$25,500 (FY88), \$26,100 (FY89). PI, 100 pct.

University of Arizona (UA)

Travel support to attend planning meeting for Budapest Water Summit. Water Resources Research Center, \$500 (June 2013).

Institute of the Environment Faculty Exploratory Research Grant to work on sabbatical project, "Transboundary aquifer institutions, policies, and governance." \$10,000 (July 2010-June 2011).

Faculty Research Development Grant to travel to Israel and Palestine to collaborate with Israeli-Palestinian Science Organization on water history project. International Affairs, \$1,500 (Mar.-Apr. 2010).

Travel support to attend Fourth World Water Forum in Mexico City. International Affairs Foreign Travel Grant, \$450, and Center for Latin American Studies, \$400 (Mar. 2006).

GRANTS and CONTRACTS / UA (cont.)

Travel support to attend LASA annual congress. Las Vegas, NV. Center for Latin American Studies. \$500 (2004).

Institute for the Study of Planet Earth (ISPE). ISPE/Udall Center Fellowship award. \$5,000 (2004-05)

Travel support to attend Third Conference of the International Water History Association, Alexandria, Egypt. International Affairs Foreign Travel Grant. \$900 (10-13 Dec. 2003).

Support for undergraduate student interns. UA/NASA Space Grant. Co-PI with R. Merideth. \$8,000 (2001-03).

Revenue from Udall Center events, publications, and other services. Co-PI with S. Cornell and R. Merideth. \$95,000 (2001-03).

Travel support to attend Fourth Inter-American Dialogue on Water Management, Foz da Iguaçu, Brazil. Center for Latin American Studies Foreign Travel Grant. \$500 (2-6 Sept. 2001).

Travel support to attend AWRA/Dundee WLPP international water Conference. Dundee, Scotland. SAHRA project. \$1,000 (7 Aug. 2001).

Travel support to attend conference, "Scientists and Decision Makers: Acting Together for Sustainable Management of Our River Systems" ("Scientifiques et décideurs. . . ." Lyon, France. International Affairs Foreign Travel Grant, \$600, SAHRA project, \$1,000 (6-8 June 2001).

Support for instruction of graduate seminar, "Arid Lands: Cultures and Institutions." Office of Arid Lands Studies. \$2,500 (2000).

Travel support to attend International Workshop on Interbasin Transfer, International Hydrological Programme of UNESCO, Paris, France. University of Arizona International Affairs Foreign Travel Grant. \$500 (26-27 Apr. 1999).

Support for preparation of a prospectus on Egypt-related capabilities at the Univ. of Arizona. Univ. of Arizona International Project Development Fund. \$4,000 (1989-90). Co-PI with G. Harrison and J. Green, 40 pct.

Support for assistance in management of information and documentation. Mauritania Agricultural Research II Project. \$22,000 (Nov. 1986 to Jun. 1988). PI, 100 pct.

Multiple Sources of Funding

Support for San Pedro [River Basin] conference, "Divided Waters—Common Ground/Agua Dividas— Areas Comunes" (1999). See listing above, under "Federal Government."

Support for conference, "Inventando Las Fronteras" (1993). See listing above, under "Private Foundations."

Support for preparation of Arizona Town Hall report (1991). See listing above, under "Industry/Private Sector."

Support for preparation of third ed. of international directory of arid lands research institutions. U.S. Man and the Biosphere Program, U.S. Agency for International Development, UNEP, Org. of Amer. States, Environmental Research Lab. \$31,000 (Jan. 1987 to Sept. 1988). Co-PI with B. S. Hutchinson, 50 pct.

Support for U.S.-Mexico Conference on Border Smelter Emissions. U.S. Environmental Protection Agency, Arizona Department of Health Services, U.S. Information Agency, U.S. Agency for International Development. \$31,000 (Apr. 1984 to Mar. 1986). Co-PI with S. M. Deeds, 70 pct.

PROFESSIONAL REVIEWS

Books, manuscripts, proposals, and promotion/tenure dossiers

Agence Nationale de la Recherche (France), American Geophysical Union, AOSIS Scholarly Books (South Africa, International Editorial Board), Arizona State Univ., Centre National de la Recherche Scientifique (France), Charles Sturt Univ. (Australia), Commonwealth Scientific and Industrial Research Organisation (CSIRO, Australia), European Science Foundation, El Colegio de la Frontera Norte (Mex.), Florida International Univ., Georgia National Science Foundation, Inter-American Institute for Global Change Research, Intergovernmental Panel on Climate Change (IPCC), International Water History Assoc., Internationally Shared Aquifer Resources Management Program, Island Press, J. Wiley Press, Kluwer Academic Press, MacArthur Fellows Program, National Center for Atmospheric Research,

National Climate Assessment (2013), National Research Foundation/South Africa, National Science Foundation, Network of Conservation Educators and Practitioners (NCEP), Oak Ridge Associated Universities/Nazarbayev Univ. Research Council, Puentes Consortium, UA Office of Arid Lands Studies, Research Council of Norway, Southern Cross Univ. (Australia), Southwest Center for Environmental Research and Policy, Southwest Environmental Health Sciences Center, The Hebrew Univ. of Jerusalem, UNESCO International Hydrological Programme, United Nations Univ. Press, Univ. of Texas-Austin, U.S.-Israel Binational Science Foundation, U.S. National Oceanic and Atmospheric Administration (NOAA), Udall Foundation, Univ. of Arizona Office of Research and Discovery (formerly Office of the Vice President for Research), Univ. of Arizona Press, Univ. of Sydney (Australia), UTEP/EPA Superfund Research & Devel. Prog., U.S. Geological Survey, U.S. Institute for Environmental Conflict Resolution, Wiley-VCH Verlag

Journal-article manuscripts for the following publications

Ambio—A Journal of the Human Environment; Annals of the Association of American Geographers; Arid Lands Newsletter; Boletín Geológico y Minero (Spain); Climatic Change; Current Opinion in Environmental Sustainability; Ecohydrology; Ecology and Society; Environmental Earth Sciences; Environmental Health Perspectives; Environmental Practice; Geoforum; Geographical Review; Globalizations; Hydrogeology Journal; Hydrology and Earth System Sciences; ; International Environmental Agreements: Politics, Law and Economics; International Journal of Global Environmental Issues, International Journal of River Basin Management; International Journal of Water; International Journal of Water Resources Development; International Negotiation; Journal for Transdisciplinary Research; Journal of Asian Studies; Journal of the American Water Resources Association; Journal of Arid Environments; Journal of Borderlands Studies; Journal of Environment and Development; Journal of Environmental Engineering; Journal of Environmental Planning and Management; Journal of Geography & Natural Disasters; Journal of Historical Geography; Journal of Political Ecology; Journal of Social Affairs; Journal of the Southwest; Natural Resources Forum; Natural Resources Journal; Nature Communications; Physics and Chemistry of the Earth; Professional Geographer; Society and Natural Resources; Southwest Climate Assessment; Water Alternatives; Water History; Water International; Water Resources Management; Water Resources Research; WIREs Climate Change

PROFESSIONAL MEMBERSHIPS

American Geophysical Union
 American Society for Environmental History
 Association for Arid Lands Studies
 Association of Borderlands Scholars
 International Association of Hydrological Sciences
 International Water History Association
 International Water Resources Association

FOREIGN LANGUAGES

French. Native proficiency. Earliest schooling (5 yrs.) in Paris, France. Primary language spoken with parents. Studied language, literature in junior high, high school, and college.

Spanish. Language programs in Quito, Ecuador (Jun. 1997), and Antigua, Guatemala (Jun. 1994). Can understand conversation, speak fairly fluently, and read fairly well.

Urdu. 5 years' formal study, including language program in Lahore, Pakistan. Can speak, though out of practice. Can read and write for research purposes.

Hindi. 5 years' formal study. Can speak, though out of practice, vocabulary not as strong as in Urdu. Can read and write for research purposes.

Hungarian. Maternal language. Fluent since birth in Budapest, can read and write with effort.
 Arabic, Persian. Read script, know some vocabulary, have elementary bibliographic knowledge.
 Italian, Portuguese. Can comprehend text with aid of a dictionary.
 Hebrew. One year's formal study while in junior high school.

SERVICE and CITIZENSHIP

National & international

- European Science Foundation College of Expert Reviewers
- Member, International Programme Committee (2013, 2016), Budapest Water Summit
- Member (2011 -), Permanent Consultation Mechanism, GEF Groundwater Governance Project (GEF/Global Environmental Facility): A Global Framework for Country Action
- Member (2011-12), Target and Solution Group (TSG) contributing to Target 4 (Water Governance) of Sixth World Water Forum, Marseille, France. 12-17 March 2012.
- Member (2011 -), IUGG (International Union of Geodesy and Geophysics) Working Group on History, representing IAHS (International Association of Hydrological Sciences)
- Edit. Rev. Board (2010 -) & co-editor (2008), special issue, "Exploring Transdisciplinary Discourses: Water, Society and the Environment in Africa," *Jour. for Transdisciplinary Research in Southern Africa*
- President, International Water History Association (IWHA, 2008-2009), Vice President/President-Elect (2006-7), Secretary and Editor, IWHA Newsletter (2004-06)
- [U.S.-Mexico] Good Neighbor Environmental Board, appointed by EPA Administrator (2004-08)
- Corresp. member, IGU (Intl. Geographical Union) Commission for Water Sustainability (2003-05)
- HELP Initiative Representative to GEWEX Water Resources Applic. Project Working Group (2000-05)
- Advisory Board, Utton Center for Intl. Transboundary Resources, Univ. of New Mexico (1999-)
- Member of ThinkingWest, a Hewlett Fdtion. consortium on environ. Issues (1999-2002)
- Steering Committee, United States/Mexico Conference on Hazardous Waste Management & Technologies. Univ. of Arizona Superfund Basic Research Program. Tucson. 9-11 Aug. 1998
- Organizing Committee for 7th annual conference of the Society of Environmental Journalists. Hosted by the University of Arizona, Udall Center, and Morris K. Udall Foundation. Tucson. 2-5 Oct. 1997
- Executive Committee, Board of Directors, Transboundary Resources Inventory Project (TRIP), a multiuniversity and multiagency effort managed by the Texas General Land Office (1995-99)
- Organizing Committee for "Tri-National Summer Institute on Innovation, Competitiveness and Sustainability," Simon Fraser University (Canada), funded by Canadian Social Sciences & Humanities Research Council, U.S. National Science Foundation, & Mexico's CONACYT (1994)
- Advisory Council, Southwest Center for Environmental Research and Policy (1993-94)
- Advisory Panel to American Association for the Advancement of Science on preparation of *Earth Explorer: Encyclopedia of the Environment*, published in 1995 as CD-ROM. Washington, D.C.
- Rio Grande Steering Committee, Texas Water Commission (1992-93)

Local/state/community

- CEDO (Intercultural Center for the Study of Deserts and Oceans; 2017-)
- Arizona-Mexico Commission (1990-96)
- Arizona Town Hall (1991-95)
- Arizona Humanities Council Speakers Bureau (1980-89)

SERVICE and CITIZENSHIP / Local/state/community (cont.)

- Organizing Committee, [Tucson] Environmental Dispute Resolution Working Group (ENDRIG, 1996-98)
- Artist Selection Panel, Sculpture of Morris K. Udall for Saguaro National Park (1993-95)
- Organizing Committee, Tucson Community Recycling Conference (1993-94)
- Friends of the Santa Cruz River (1992-)
- Tucson-Nouakchott (Mauritania) Sister City Committee (1988-90)
- Artist Selection Panel, Tucson Holocaust Monument Committee (1986-88)
- President (1984) and Vice President (1982-84), Southern Arizona United Nations Association

University committees

- Faculty Advisory Committee, Institute of the Environment (formerly ISPE, 2009-12)
- Executive Committee of Institute for the Study of Planet Earth (ISPE, 1994-2009)
- Faculty Advisor, public policy curriculum, Dept. of Soils, Water and Environmental Science (2000-)
- Interdisciplinary Graduate Committee on Arid Lands Resource Sciences (1992-)
- Faculty, Latin American Studies program (1997-), Core Faculty (2002-)
- Committee on Global Change, for Interdisciplinary Ph.D. Minor (1995-)
- Water Faculty Advisory Committee (2001-05)
- Fulbright Fellowship Review Committee (1988-2002, 2012)
- Rhodes Scholarship Review Committee (2000-02)
- NASA Space Grant Steering Committee (2000-02)

Departmental & college committees

- Committee to establish graduate minor in conflict resolution studies (1996-99)
- Advisory Committee on Interdisciplinary Graduate Planning Program (1991-96)
- Governing Board (1986-88, 1996, 2002-03), member, (1985-), Center for Middle Eastern Studies
- Executive Committee of Working Group on Borderlands (1994-98)
- National Security Education Program Scholarship Selection Committee (1995-96)
- Environmental Quality Committee (1994-96)
- Advisory Committee, WHO Collab. Center for Border & Rural Health Research Devel. (1996-97)
- College Coordinating Council for International Programs (1989-93)
- University Committee on Mexico (1990-92)
- Working Group on Inter-American Relations (1991-92)
- U.S.-Mexico Border Policy Studies Group (1988-90)
- Environmental Science and Policy Advisor, B.S. Program in Environmental Science, Department of Soil, Water and Environmental Science, College of Agriculture and Life Sciences (2000-)
- Continuing Status Review Committee for Office of the Vice President for Research (2008, 1998, chair)
- Chair, Sunset Review Comm. for Arid Lands Info. Center, College of Agric. and Life Sciences (2002)
- Chair, Comm., Restructure ctrs. on Mex., Latin Amer., Southwest, Coll. of Social & Behav. Sci. (1992)
- Co-organizer, Egypt Working Group (1988-90)
- Faculty Honors Program (1985-86, 1987-89)
- Committee on Women in Development (1983-90)
- College of Agriculture Committee on Mexico (1991-93)
- Chair (1988-89) and Member (1989-), Publications Committee, Office of Arid Lands Studies
- Council for International Agriculture Programs (1988-89)
- Performance Review Committee for Director of OALS for Dean of Agriculture (1988)

ACADEMIC DISTINCTIONS

- Honorable Mention, Best Paper Award (June 2017), by International Water Resources Association for “Desalination and water security in the US–Mexico border region: assessing the social, environmental and political impacts,” by M. O. Wilder, I. Aguilar-Barajas, N. Pineda-Pablos, R. G. Varady, S. M. Megdal, J. McEvoy, R. Merideth, A. A. Zúñiga-Terán, and C. A. Scott. 2016, in *Water International*.
- Honorable Mention, Best Paper Award (Aug. 2013), by Routledge and International Water Resources Association for “Hydrosolidarity and beyond: Can ethics and equity find a place in today’s water resource management?” by A. Gerlak, R. G. Varady, O. Petit, and A. Haverland, in *Water International* (2013).

- Award for Excellence in Global Service (Nov. 2012). UA Office of Global Initiatives & Center for English as a Second Language.
- Visiting Scholar (June 2011). North-West University/Vaal Triangle Campus, South Africa
- Guy T. McBride, Jr., Lecture in Public Affairs (Fall 2010), “Bushwhacking through the wilds of environmental policy: An interdisciplinarian’s crossborder adventures through arid lands, changing climate, and sustainability.” Colorado College of Mines. Denver, CO.
- Roy F. Weston Distinguished Global Sustainability Lecture (Spring 2010), “Global Water Initiatives and Climate, Arid Lands, and Transboundary Management Policy.” Center for Sustainability and the Global Environment, Gaylord Nelson Institute for Environmental Studies, Univ. of Wisconsin-Madison
- President, International Water History Association (2008-09), previously Vice President and Secretary
- Keynote address (Jan. 2009). “Global Water Initiatives and World Water Governance.” Advancing the Science of Limnology and Oceanography (ASLO) biennial Aquatic Sciences Meeting. Nice, France.
- Visiting Scholar (April 2008), North-West University/Vaal Triangle Campus, South Africa
- ISPE (Institute for the Study of Planet Earth) / Udall Center Fellow (2004-05), University of Arizona
- Visiting Scientist (Sabbatical, 2003-04), UNESCO International Hydrol. Programme, Paris, France
- Visiting Scholar (1982-84), Department of Oriental Studies, University of Arizona
- Dissertation Grant (1980), Program Development Fund, Graduate College, University of Arizona
- Research Scholar (1977-78), Department of History, Lucknow University, Lucknow, India
- Research Fellowship (1977-78), American Institute of Indian Studies, dissertation research in India
- Fulbright-Hays Doctoral Research Fellowship (1977-78), dissertation research in Pakistan (declined)
- Research Fellowship (1977-78), Amer. Inst. of Pakistan Studies, dissert. research in Pakistan (decl.)
- E. Blois DuBois Foundation Scholarship (1975-1977), University of Arizona
- Berkeley Urdu Language Program in Pakistan (1975), University of California, Berkeley
- Fellowship (1974-75), NDEA Title VI Foreign Language Program (Hindi-Urdu), Univ. of Arizona
- Graduate Tuition Scholarship (1974-75), University of Arizona
- Special Fellowship in Mathematics (1966), Dept. of Mathematics, Polytechnic Institute of Brooklyn
- New York State Regents Scholar Incentive Award (1965-66), Polytechnic Institute of Brooklyn
- New York State Regents Scholarship (1961-1965), City College of New York

INTERNATIONAL TRAVEL

Africa. Botswana (2016). Ivory Coast (1984). Kenya (1989). Mali (1986). Mauritania (1990, 88, 88, 86). Namibia (2016). Niger (1986, 86, 84). Senegal (1989, 88, 88, 86, 86). South Africa (2016, 14, 11, 08). Zambia (2016). Zimbabwe (2016).

Americas. Argentina (2016, 15, 14, 13, 10, 09, 08, 01). Brazil (2011, 10, 01, 1999). Canada (frequently since 1954). Chile (2016, 15, 14, 12, 09). Colombia (2015). Costa Rica (2008). Ecuador (2005, 1997). Guatemala (1994). Honduras (1994). Martinique (1972). Mexico (very frequently since 1973). Panama

(2014, 08, 1999). Paraguay (2001). Peru (2016, 15, 14). Puerto Rico (1968). St. Pierre & Miquelon (2000). Uruguay (2014, 12, 10, 09, 08).

Asia and Oceania. Afghanistan (1970). Bangladesh (2002). Cambodia (2005). China (2012, 06). Hong Kong (1985, 71). India (2002, 1985, dissert. 77-78, 75, 70-71). Japan (2003, 02, 1985, 71). Kazakhstan (2012). Laos (2014). Macau (1971). Malaysia (1970). Myanmar/Burma (1971). Nepal (1970). New Zealand (1992). Pakistan (1985, language prog. 75, 70). Philippines (1971). Singapore (1971). South Korea (1971). Sri Lanka (1971). Taiwan (1971). Thailand (2005, 1971). Vietnam (2014).

Europe. Austria (2017, 16, 1993, 77, 70). Belgium (2016, 13, 05, 1967). Croatia (1990). Cyprus (1970). Cyprus [Turkish] (1970). Czechoslovakia (1970). Czech Repub. (1993). Denmark (2009, 02, 1967). England (2017, 16, 15, 13, 04, 02, 01, 1990, 89, 87, 86, 78, 70, 68, 67, 61). Estonia (2004). Finland (2004). France (2017, 16, 15, 13, 12, 11, 10, 09, 08, 06, 05, sabbatical 2003-04, 02, 01, 00, 1999, 98, 95, 90, 88, 87, 86, 83, 77, 70, 68, 67, 61, residence 1947-52). Germany/West Germany (2015, 13, 04, 03, 1993, 85, 77, 75, 67). Greece (2010, 1970, 69). Hungary (2017, 16, 13, 12, 05, 1993, 77, 70, place of birth & resid. until 1947). Ireland (1968). Italy (2016, 15, 06, 01, 1990, 88, 87, 67, 52, 47). Liechtenstein (1990). Luxembourg (2013). Macedonia/FYROM (2010). Monaco (1998, 05, 87, 77, 67, 61). Netherlands (2014, 13, 10, 09, 08, 07, 06, 03, 02, 1967). Poland (1993). Portugal (2015, 1968). Romania (2013). Scotland (2015, 04, 01). Serbia (2013). Slovakia (2016, 1993). Slovenia (1990). Spain (2008, 05, 1998, 95, 68, 52). Sweden (2004, 03, 02, 1967). Switzerland (2016, 04, 1990, 87, 77, 70). Turkey (2009, 1969). Vatican (1990). Yugoslavia (1990, 47).

Middle East/North Africa. Egypt (2003). Iran (1970). Israel (2010, 09, 1969). Jordan (2012). Morocco (1988, 68). Oman (1985). Palestine (2010, 09, 1969). Tunisia (1970). Turkey (1969). Yemen (1985, 83-84).

SUMMARY

<u>Publications</u>	<u>Number</u>
Books, monographs, digests, ed. volumes, journal special issues	10
Peer-reviewed journal articles	49
Book chapters	42

Proceedings papers	20	
Book reviews and other pubs	51	
Technical reports	46	
Total publications	218	
Coauthors	222	
<u>Presentations</u>		
Conference	82	
Symposia, seminars, workshops	74	
Other presentations and participation	97	
Total presentations and participation	253	
<u>Reviews</u>		
Journals	52	
Organizations	45	
Countries & intl. orgs.	15	
<u>Countries visited</u>		
Professionally	49	
Total	108	
<u>Grants and contracts</u>		<u>Amount (\$)</u>
Federal		11,470,960
International		1,916,674
Private foundations		3,102,323
State		74,000
Industry-private sector		106,600
University of Arizona		153,350
Multiple sources/other		62,000
Total		16,885,907