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### EDUCATION

1994-97      Cornell University, Ph.D. Major Field: Hydrology  
1989-91      Cornell University, M.S. Major Field: Hydrology  
1981-85      Swarthmore College, B.S. Major Field: Engineering; B.A. Major Field: Religion

### TEACHING, SUPERVISING AND ADVISING

Course: Water, Environment, and Society (University of Arizona, GEOG 304, Spring 2007)  
Teaching Assistant, Irrigation & Drainage Design (Cornell University, Spring 1995)  
Supervised one postdoctoral researcher and 6 Masters and Ph.D. students

### ACADEMIC APPOINTMENTS AND EMPLOYMENT

- *Assistant Research Professor of Water Resources Policy* (2006- ), Udall Center for Studies in Public Policy; affiliated faculty with: the Institute for the Study of Planet Earth, Center for Latin American Studies, Arid Lands Studies.
- *Assistant Professor of Geography and Regional Development* (2006- ), University of Arizona
- *Senior Project Specialist – Hydrometeorology* (2005-06), National Oceanic and Atmospheric Administration, National Weather Service, International Activities Office, Silver Spring, MD.
- *Principal Researcher - Hydrology; Director for Asia* (2001-05), International Water Management Institute (IWMI), Hyderabad, India.
- *Hydrologist* (2000-01), U.S. Agency for International Development, Global Environment Center, Washington, DC (seconded by IWMI, Colombo, Sri Lanka).
- *Senior Researcher, Mexico Program Leader* (1997-2000), IWMI, Guanajuato, Mexico.
- *Research Associate* (1994-97), New York City Watershed Project, Cornell University, Ithaca, NY.
- *Project Manager* (1992-94), Catholic Relief Services, Tegucigalpa, Honduras.
- *Research Assistant* (1991-92), Cornell Irrigation Studies Group, Ithaca, NY.
- *Intern - Watershed Management* (1990), The Ford Foundation, New Delhi, India.
- *Coordinator - Watershed Management and Small-scale Irrigation* (1987-89), Seva Mandir (an NGO), Udaipur, Rajasthan, India.
- *Consultant - Appropriate Shelter* (1987), Development Alternatives (NGO), N. Delhi, India.
- *Assistant Engineer* (1985-87), Baker Engineers, Alexandria, VA.

## **PUBLICATIONS - Refereed Journal Articles**

- Biggs, T.W., C.A. Scott, B. Rajagopalan, H.N. Turrall. Accepted, in revision. Trends in solar radiation due to changes in clouds and aerosols, southern India, 1952-1997. *International Journal of Climatology*.
- Biggs, T.W., C.A. Scott. Accepted, in revision. Radiation and potential evaporation estimated from satellites, FAO-56, and evaporation pans in Southern India. *Journal of Applied Meteorology and Climatology*.
- Biggs, T.W., P.K. Mishra, C.A. Scott. Accepted, in revision. Rainfall simulation experiments for KINEROS and SCS runoff models, southern India. *ASCE Journal of Hydrologic Engineering*.
- Biggs, T. W., M. K. Gumma, P. S. Thenkabail, C.A. Scott, G. R. Parthasaradhi, H. Turrall. Accepted, forthcoming. Vegetation phenology and irrigated area mapping using MODIS time-series, ground surveys, and agricultural census data in Krishna River Basin, India. *International Journal of Remote Sensing*.
- Ahmad, M., T.W. Biggs, H. Turrall, C.A. Scott. 2006. Application of SEBAL approach and MODIS time-series to map vegetation water use patterns in the data scarce Krishna river basin of India. *Water Science & Technology* 53(10): 83-90.
- Scott, C.A. and T. Shah. 2004. Groundwater overdraft reduction through agricultural energy policy: insights from India and Mexico. *International Journal of Water Resources Development* 20(2): 149-164.
- Joshi, P.K., V. Pangare, B. Shiferaw, S.P. Wani, J. Bouma, C.A. Scott. 2004. Watershed development in India: synthesis of past experiences and needs for future research. *Indian Journal of Agricultural Economics* 59(3): 303-320.
- Scott, C.A., W.G.M. Bastiaansen, M. Ahmad. 2003. Mapping root zone soil moisture using remotely sensed optical imagery. *ASCE Journal of Irrigation and Drainage Engineering* 129(5): 326-335.
- Scott, C.A., H. El-Naser, R.E. Hagan, A. Hijazi. 2003. Facing water scarcity in Jordan: reuse, demand reduction, energy and transboundary approaches to assure future water supplies. *Water International* 28(2): 209-216.
- Scott, C.A., P. Silva-Ochoa. 2001. Collective action for water harvesting irrigation in the Lerma-Chapala Basin, Mexico. *Water Policy* 3 (2001): 555-572.
- Scott, C.A., M.F. Walter, G.N. Nagle, M.T. Walter, N.V. Sierra, E.S. Brooks. 2001. Residual phosphorus in runoff from successional forest on abandoned agricultural land: 1. biogeochemical and hydrological processes. *Biogeochemistry* 55(3): 293-309.
- Scott, C.A., M.F. Walter. 2001. Residual phosphorus in runoff from successional forest on abandoned agricultural land: 2. hydrological and soluble reactive P budgets. *Biogeochemistry* 55(3): 311-325.
- Scott, C.A., K.W. Weiler. 2001. Modeling soluble phosphorus desorption kinetics in tile drainage. *ASCE Journal of Irrigation and Drainage Engineering* 127(2): 70-76.
- Walter, M.T., J.Y. Parlange, M.F. Walter, X. Xin, C.A. Scott. 2001. Pollutant release from a surface source during rainfall-runoff. *Journal of Environmental Quality* 30(1): 151-159.
- Barker, R., C.A. Scott, C. de Fraiture, U. Amarasinghe. 2000. Global water shortages and the challenge facing Mexico. *International Journal of Water Resources Development* 16(4): 525-542.
- Scott, C.A. 2000. How "participatory" is integrated water resources management? In N. Faruqui and O. Al-Jayyousi (eds.) Reflection on the World Water Vision by the 'Next Generation of Water Leaders' *Water International* 25(2): 303-311.
- Weiler, K.R., M.T. Walter, M.F. Walter, E.S. Brooks, C.A. Scott. 2000. Seasonal risk analysis for flood plains in the Delaware River basin. *Journal of Water Resources Planning and Management*. 126(5): 320-329.

- Scott, C.A., M.F. Walter, E.S. Brooks, J. Boll, M.B. Hes, M.D. Merrill. 1998. Impacts of historical changes in land use and dairy herds on water quality in the Catskills Mountains. *Journal of Environmental Quality* 27: 1410-1417.
- Scott, C.A. 1998. Comment on 'Design for an inexpensive continuous digital output water level recorder' by S. Reedyk *et al.* (Paper 97WR00678). *Water Resources Research* 34(9): 2419-2421.
- Scott, C.A., L.D. Geohring, M.F. Walter. 1998. The water quality impacts of tile drains in shallow, sloping, structured soils. *Applied Engineering in Agriculture* 14(6): 599-603.
- Scott, C.A. and M.F. Walter. 1993. Local knowledge and conventional soil science approaches to erosional processes in the Shivalik-Himalaya. *Mountain Research and Development* 13(1).

#### **PUBLICATIONS - Books/Edited Volumes**

- Scott, C.A. 2005. Investing in the reuse of treated wastewater. Investment Note 5.3. Shaping the Future of Water for Agriculture: A Sourcebook for Investment in Agricultural Water Management. pp. 185-189. World Bank, Washington, DC.
- Sharma, B.R., J.S. Samra, C.A. Scott, S.P. Wani (eds.) 2005. Watershed Management Challenges: Improving Productivity, Resources, and Livelihoods. International Water Management Institute, New Delhi, India.
- Scott, C.A, N.I. Faruqui, L. Rachid-Sally (eds.) 2004. Wastewater Use in Irrigated Agriculture: Confronting the Livelihood and Environmental Realities. CABI Publishing, Wallingford, U.K.
- Scott, C.A., T. Shah, S.J. Buechler, P. Silva-Ochoa. 2004. La fijación de precios y el suministro de energía para el manejo de la demanda de agua subterránea: enseñanzas de la agricultura mexicana. In C. Tortajada, R. Sandoval, E. Castelán (eds). Hacia una Gestión Integral del Agua en México: Retos y Alternativas. 521p. Mexico City, Porrua Editores.
- Wester, P., C.A. Scott, M. Burton. 2004. River basin closure and institutional change in Mexico's Lerma-Chapala Basin. Chapter 8 (pp. 125-144) in M. Svendsen (ed.) Irrigation and River Basin Management: Options for Governance and Institutions. CABI Publishing, Wallingford, U.K.
- Scott, C.A. 2003. Recycling and reuse of 'derivative water' under conditions of scarcity and competition. pp. 102-119. In C. Figueres, C. Tortajada, J. Rockstrom, (eds.) Rethinking Water Management: Innovative Approaches to Contemporary Issues, Earthscan, London, 242 pp.
- Scott, C.A., P. Silva-Ochoa, V. Florencio-Cruz, P. Wester. 2001. Competition for water in the Lerma-Chapala basin. In A. Hansen and M. van Afferden (eds.) The Lerma-Chapala Watershed: Evaluation and Management. Kluwer Academic/Plenum Publishers.
- Scott, C.A., C. Garcés R. 2001. Conjunctive management of surface water and groundwater in the middle Río Lerma Basin, Mexico. In A.K. Biswas and C. Tortajada (eds.) Integrated River Basin Management. Oxford University Press.
- Scott, C.A. 1994. Facing environmental degradation in the Aravalli Hills, India. In A.C. Millington and K. Pye (eds.). Environmental Change in Drylands: Biogeographical and Geomorphological Perspectives. Wiley. Chichester, UK.
- Scott, C.A. 1994. Streamside pumpwell, Rajasthan, India and Discharge regulator for pressurized systems in Haryana, India. In R. Yoder (ed.), Designing Irrigation Structures for Mountainous Environments. International Irrigation Management Institute. Colombo, Sri Lanka.
- Sivamohan, M.V.K., C.A. Scott (eds.) 1994. India: Irrigation Management Partnerships. Booklinks. Hyderabad, India.
- Sivamohan, M.V.K, C.A. Scott, M.F. Walter. 1992. Vetiver grass for soil and water conservation: prospects and problems. In D. Pimentel (ed.), World Soil Erosion and Conservation. Cambridge, UK.

### **PUBLICATIONS - Research Reports**

- Amarasinghe, U., B. Sharma, N. Aloysius, C.A. Scott, V. Smakhtin, C. de Fraiture. 2005. Spatial variation in water supply and demand across the river basins of India. IWMI Research Report. International Water Management Institute, Colombo, Sri Lanka.
- Shah, T., C.A. Scott, A. Kishore, A. Sharma. 2003. Energy-irrigation nexus in South Asia: improving groundwater conservation and power sector viability. IWMI Research Report No. 70. International Water Management Institute, Colombo, Sri Lanka.
- Scott, C.A., J.A. Zarazúa, G. Levine. 2000. Urban-Wastewater Reuse for Crop Production in the Water-Short Guanajuato River Basin, Mexico. *IWMI Research Report 41*. International Water Management Institute. Colombo, Sri Lanka.
- Scott, C.A., P. Wester, B. Marañón-Pimentel (eds.). 2000. Asignación, Productividad y Manejo de Recursos Hídricos en Cuencas. (Allocation, Productivity and Management of Basin Water Resources). *Serie Latinoamericana No. 20*. International Water Management Institute. Mexico, D.F. Mexico.
- Flores-López, F.J., C.A. Scott. 2000. Superficie Agrícola Estimada Mediante Análisis de Imágenes de Satélite en Guanajuato, México. (Estimating Agricultural Area Using Satellite Imagery in Guanajuato, Mexico). *Serie Latinoamericana No. 15*. International Water Management Institute. Mexico, D.F. Mexico.
- Flores-López, F.J., C.A. Scott. 1999. Simulación de Alternativas del Manejo del Agua en la Cuenca del Río San Juan, México. (Simulation of Water Management Alternatives in the Rio San Juan Basin, Mexico). *Serie Latinoamericana No. 9*. International Water Management Institute. Mexico, D.F. Mexico.
- McKinney, D.C., X. Cai, M.W. Rosegrant, C. Ringler, C.A. Scott. 1999. Modeling Water Resources Management at the Basin Level: Review and Future Directions. *System-wide Initiative on Water Management Paper 6*. International Water Management Institute, Colombo, Sri Lanka.

### **PUBLICATIONS - Work in Progress**

- Sikka, A.K., C.A. Scott, B.R. Sharma. Submitted. Integrated basin water management in the Indo-Gangetic Basin. *Hydrobiologia*.
- McCartney, M., C.A. Scott, J.H.J. Ensink, B.B. Jiang, T.W. Biggs. In preparation. Salinity implications of wastewater irrigation in the Musi River catchment, India. *To be submitted to Journal of Environmental Quality*.
- Biggs, T.W., C.A. Scott, *et al.* In preparation. Irrigation effects on basin-scale evapotranspiration: exploring the complementary hypothesis in the Krishna River Basin, India. *To be submitted to Water Resources Research or Journal of Hydrology*.
- Diener, S.W., J.H.J. Ensink, F.P. Amerasinghe, C.A. Scott. In preparation. Application of a biotic index for rapid water quality assessment in the highly polluted Musi-River in India. *To be submitted to Journal of Environmental Quality*.

### **OTHER PUBLICATIONS - Conference Proceedings**

- Scott, C.A., P. Wester, C. Garcés R. 1998. Integración vertical de funciones transferidas para el manejo de las cuencas: observaciones conceptuales. (Vertical integration of functions transferred to users in basin management: conceptual observations). In Memoria del III Seminario Internacional sobre Transferencia de Sistemas de Riego. Gómez Palacio, Dgo., México. Sept. 2-4 1998. Colegio de Postgraduados, Montecillo, México.
- Scott, C.A., M.F. Walter, B.J. Dibeler, J.R. Frankenberger. 1996. Hydrologic land use classification with thematic and spatial inputs. Proceedings Watershed Restoration and Management Symposium, Syracuse NY, July 14-17 1996. American Water Resources Association, Herndon VA.

### **OTHER PUBLICATIONS – Working Papers**

- Bouma, J.A., C.A. Scott. 2006. The possibilities for dryland crop yield improvement in India's semi-arid regions – observations from the field. Comprehensive Assessment of Water Management in Agriculture Discussion Paper No. 3. International Water Management Institute, Colombo, Sri Lanka.
- Sivamohan, M.V.K., C.A. Scott. 1992. The command area development programme in India: a policy perspective. *Irrigation Management Network Paper 20*, Overseas Development Institute and International Irrigation Management Institute, London, UK, October.
- Brown, N., C.A. Scott, et al, 1991. Analysis of agroforestry at Plan Sierra, Dominican Republic. In L.E. Buck and J.P. Lassoie (eds.). Agroforestry Planning and Evaluation in Marginal Areas: Exercises in Program Design. *Natural Resources Research and Extension Series No. 37*, Department of Natural Resources, Cornell University, Ithaca, NY, December.
- Scott, C.A., J.R. Gupta. 1990. Forest resource conservation and development plan: Shivalik Hills. *Sustainable Forest Management Working Paper Series No. 6*, Ford Foundation, New Delhi, India.

### **OTHER PUBLICATIONS – Book Reviews and Other Articles**

- Puskur, R., J. Bouma, C.A. Scott. 2004. Sustainable livestock production in semi-arid watersheds. *Economic and Political Weekly XXXIX (31)*: 3477-3483.
- Shah, T., C.A. Scott, S. Buechler. 2004. A decade of water sector reforms in Mexico: lessons for India's new water policy. *Economic and Political Weekly XXXIX (4)*: 361-370.
- Scott, C.A. 1989. A pilgrimage to Gangotri: Himalayan source of the River Ganga. *Sanskriti 2 (1&2)*.
- Scott, C.A. 1988. Medbundi: soil and water conservation in Rajasthan. *Indian Architect and Builder*. December.
- Joshi, A., C.A. Scott, N. Khetan. 1987. *Mitti Jal Ko Bachao* (Hindi, "Save Soil and Water," farmers' field manual). *Seva Mandir Prakashan*, Udaipur, India.

### **SCHOLARLY PRESENTATIONS**

- "Urban wastewater impacts on the spatial distribution of solutes and microbial constituents in the Musi River, India." *American Geophysical Union Spring Meeting*, Baltimore, 23 May 2006.
- "Soil and Water Quality under Wastewater Irrigation," *International Soil Science Society Conference*, New Delhi, 28 January 2005.
- "Wastewater Use in Irrigated Agriculture," *World Water Week*, Stockholm, 15-20 August 2004.
- "Groundwater in the Indus-Ganges Basin: Energy Supply and Pricing Impacts," *World Water Week*, Stockholm, 15-20 August 2004.
- "Groundwater Overdraft Reduction through Agricultural Energy Policy," *III World Water Forum*, Kyoto, 21-24 March 2003.
- "Energy Pricing and Supply for Groundwater Demand Management: Lessons from Mexican Agriculture," *Forward-Thinking Policies for Groundwater Management: Energy, Water Resources, and Economic Approaches*, IWMI, Indian Council for Agricultural Research (ICAR) and Colombo Plan Secretariat, New Delhi, 2 - 6 September 2002.
- "Visualizing the Invisible: Harnessing Local Initiative for Conjunctive Management of Surface and Groundwater," *Indian Groundwater Policy Workshop*, ICAR and IWMI, Karnal, Haryana, 6-8 November 2001.
- "Facing Water Scarcity in Jordan," *American Geophysical Union, Strategies for Water Supply Development/Management in Developing Nations*, AGU, Boston, 29 May - 2 June 2001.
- Welcome and opening remarks. Hosted conference *Asignación, Productividad y Manejo de Recursos Hídricos en Cuencas* (Allocation, Productivity and Management of Basin Water

- Resources), International Water Management Institute, Guanajuato, Mexico, 7-9 May 2000.
- “Water Scarcity and Food Production Assessments using PODIUM (the Policy Dialogue Model),” *Consultation on the Americas Vision on Water for Food*, McGill University, Montreal, Canada, 30 June – 2 July 1999.
- “Remote Sensing Assessment of the Extent of Groundwater Irrigation in the Lerma-Chapala Basin, Mexico,” *International Symposium on Integrated Water Management in Agriculture*, INIFAP and IMTA, Gómez Palacio, Mexico, 16-18 June 1999.
- “Conjunctive Management of Surface Water and Groundwater in the Middle Río Lerma Basin, Mexico,” *International Workshop on Integrated River Basin Management in Latin America*, International Water Resources Association, Mexico City, 26-28 April 1999.
- “Interactive, Real-time Simulation of Conjunctive Surface and Groundwater Management with Mexican Water Professionals.” Hands-on module presented at training on *Integrated River Basin Management*, Third World Centre for Water Management, Mexico City, 29 April 1999.
- “Integración Vertical de Funciones Transferidas para el Manejo Sostenible de las Cuencas: Observaciones Conceptuales,” III Seminario Internacional: Transferencia de Sistemas de Riego, Colegio de Postgraduados, Torreón, Mexico, 2-5 Sept. 1998.
- “Tile Drain Phosphorus Export from Manure-Applied Land,” *National Water Quality Watershed Project Symposium*, USDA and USEPA, Washington DC, 22-26 September 1997.
- “Monitoring and Research to Assess the Water Quality Impacts of Best Management Practices,” *Agricultural Environmental Management Conference*, Natural Resources Conservation Service, Auburn NY, 28 May 1997.
- “Hydrologic Land Use Classification with Thematic and Spatial Inputs,” *Watershed Restoration and Management Symposium*, American Water Resources Association, Syracuse NY, 14-17 July 1996.
- “Who Participates in Whose Irrigation Management? A Case of Government Involvement in Farmer-Managed Irrigation in the Shivalik Hills,” *National Workshop on Farmers’ Participation in the Management of Irrigation*, Administrative Staff College of India, Hyderabad, India, February 1992.
- “Streamside Jackwell,” and “Discharge Regulator for Pressurized Systems,” *Workshop on Irrigation Design for Hill/Mountain Regions*, International Irrigation Management Institute, Kathmandu, Nepal, January 1992.
- “Workshop Report: Reconversion of Wasteland into Agricultural Land,” *Sustainable Development and Biodiversity Symposium*, Cornell University, Ithaca, USA, September 1991.
- “Soil Moisture Enhancement and Groundwater Recharge Through the Integration of Vegetative and Structural Measures in Indian Semi-Arid Zone Watersheds,” *European Geophysical Society Conference*, Katlenburg-Lindau, Germany, April 1991.
- “The Depur-Dolpura-Shyampura Social Forestry Project,” *Conference on Small Watershed Management*, Society for Promotion of Wasteland Development, New Delhi, India, November 1988.
- “Cover the Earth: Plasters for Mud Buildings,” *Housing and Urban Development Conference*, Trivandrum, India, November 1987.
- “Ultraviolet Sterilization of Drinking Water,” International Conference on Resource Mobilization for Drinking Water and Sanitation in Developing Countries, Water and Sanitation for Health (WASH), San Juan, Puerto Rico, May 1987.

#### **OTHER CONFERENCE PRESENTATIONS AND PARTICIPATION**

- 2nd World Water Forum, The Hague, Netherlands, March 2000.
- 3rd World Water Forum, Kyoto, Japan, March 2003.

## **GRANTS AND CONTRACTS (P.M = PROJECT MANAGER; P.I. = PRINCIPAL INVESTIGATOR)**

Mexico River Forecasting. (P.M.) \$0.36 million collaborative grant from the Comisión Nacional del Agua (CNA) Gerencia de Aguas Superficiales e Ingeniería de Rios (2005-06).

India Climate Forecast Systems (Component of the Disaster Management Support Project). (P.M.) \$0.56 million collaborative grant from USAID/ New Delhi (2005-06)

Romania Destructive Waters Abatement and Management. (Co-P.M.) \$0.72 million collaborative grant from the Romanian Ministry of Environment & Water Management (2005-06)

Health & Food Safety from Expanding Wastewater Irrigation, South Asia. (P.I.) \$1.05 million competitive grant from German Cooperation Ministry (BMZ) (2004-05).

Urban & Peri-Urban Agriculture, South Asia. (P.I.) \$0.85 million merit-based grant from Netherlands Cooperation Department (DGIS) and Canadian International Development Research Centre (2004-05).

Agricultural Water Productivity in the Krishna Basin. (P.I.) \$0.96 million competitive grant from Australian Centre for International Agricultural Research (2004-05).

Linking Forest and Irrigation Management in the Himalayas. (Co-P.I.) \$0.3 million competitive grant from Consultative Group on International Agricultural Research, Challenge Program on Water and Food (2004-05).

Water-Energy Nexus in Agriculture. (P.I. for \$0.73 million IWMI subcontract under prime contractor P.A. Consulting) \$6 million, GSA schedule, 2-phase competitive grant from USAID (2002-05).

Livestock-Environment-Watershed Interactions. (P.I.) \$0.29 million merit-based grant from Swiss Development Cooperation and U.N. Food and Agriculture Organization (2002-04).

Pro-poor Irrigation Interventions. (Research Supervisor) \$0.11 million competitive grant from Asian Development Bank (2002-03).

Irrigation Management, Mexico. (Project Manager) \$1.5 million multi-phase merit-based grant from the Ford Foundation (1997-2000).

New York City Watershed Water Quality. (Research Associate). Conducted Ph.D. research on this project funded by NY City Dept. of Environmental Protection (1994-97); worked with P.I. Tammo Steenhuis to secure Role of Subsurface Drainage in Transport of Cryptosporidium Parvum Oocysts grant (USDA, \$0.184 million).

## **PROFESSIONAL AFFILIATIONS**

American Geophysical Union

International Water Resources Association

Association of American Geographers

Registered Professional Engineer (P.E.) - New York State

## **FOREIGN LANGUAGES**

Spanish, Hindi, Nepali, German

## **UNIVERSITY COMMITTEES**

Geography and Regional Development Undergraduate Committee (Fall 06 - )

## **ACADEMIC DISTINCTIONS**

Graduated with Distinction, Swarthmore College, 1985.

Foreign Language and Area Studies Fellowship (Nepali language), Cornell University, 1989-91.

Gamma Sigma Delta (Honor Society of Agriculture), 1991.