Bryan Bruns, Ph.D.

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Consulting Sociologist. Specializing in improving participation and service delivery in irrigation and water management; institutional reform in water governance, helping farmers organize water user associations, and transforming social dilemmas into win-win cooperation

Skills: institutional analysis and development; facilitating public participation; technical editing; social assessment and research; improving commons and infrastructure service provision

Professional work experience in Sri Lanka, India, Yemen, Egypt, Ghana, Nigeria, Malawi, China, Tajikistan, Nepal, Bangladesh, Philippines, Vietnam, Laos, Cambodia, Indonesia, and Thailand. Consulting for the World Bank, Asian Development Bank, International Water Management Institute, International Food Policy Research Institute, United States Agency for International Development, United Nations agencies, Ford Foundation, World Wildlife Fund, CARE, Oxfam-America and Foundation for Ecological Security. Independent consultant 1992-present.

Selected Publications

Water Rights Reform: Lessons for Institutional Design. Edited by Bryan Bruns, Claudia Ringler, and Ruth Meinzen-Dick. Washington, D.C.: IFPRI. 2005.

<u>Negotiating Water Rights</u>. Edited by Bryan Bruns and Ruth Meinzen-Dick. London: Intermediate Technology Publications. New Delhi: Vistaar. 2000.

Additional papers available at www.bryanbruns.com and via Google Scholar

Ph.D. Sociology of Development, Cornell University. 1991.

Minor Fields: Agricultural Economics, Southeast Asian Studies.

M.S. Sociology of Development, Cornell University. 1984.

B.A. Major in Anthropology, Beloit College. 1979.

Fulbright Research Award. Thailand. 1985-1986.

Certificate in Public Participation. International Association for Public Participation. 2003.

Visiting Scholar, Ostrom Workshop in Political Theory and Policy Analysis, Indiana University Bloomington. 2009-2010.

Summer Institute of Civic Studies, Tisch College of Citizenship and Public Service, Tufts University. June 2015

Citizenship: USA. Born February 1, 1956 in Charlottesville, Virginia.

Languages: English, Thai, Indonesian, and Lao.

Fellow of the Society for Applied Anthropology International Association for the Study of the Commons International Association for Public Participation

PROFESSIONAL EXPERIENCE

Participatory Irrigation Management Specialist. February-April 2019. Egis Eau. Improving System Efficiencies and Water Productivity, Mahaweli Water Security Investment Program, Sri Lanka. Responsible for program elements related to institutions, both irrigation and agriculture, at local and district levels, and for the assessment and development of institutional reforms to improve water and land productivity.

Team Leader and Irrigation Institutions Development Specialist. June 2016-October 2018. SMEC International. Technical Assistance for Water User Association and Scheme Management Development in Bakolori and Middle Rima Valley Irrigation Projects, for the Transforming Irrigation Management in Nigeria Project (TRIMING). Assess institutional requirements and develop new arrangements for irrigation operations and maintenance, including guidance for WUA training programs and cadastral survey. Coordinate team activities, handle client liaison, and ensure overall timely delivery and quality management.

Sociologist. July-December 2017. International Food Policy Research Institute. Co-author for two papers on polycentricity in natural resource governance, with particular reference to management of the commons in India.

Sociologist. January-February, May, and October 2013. April-June, and November 2014. April and September 2015. FAO-World Bank Technical Cooperation Program. Egypt Enhanced Water Resources Management Project, Integrated Sanitation and Sewerage Infrastructure, and Project, and Integrated Irrigation Improvement and Management Project. Assessed coordination and sustainability in involvement of water user associations and community development associations. Reviewed compliance with social safeguards requirements.

Sociologist. August and December 2013. January, July, and December 2014. July 2015. Foundation for Ecological Security. Water Commons–Influencing Policy and Practice. Assessed issues and options in development of water commons in India, including groundwater governance, and assisted in translating the conceptual framework of water as commons into effective implementation plans.

Sociologist. September-October 2014. International Food Policy Research Institute. Experimental games for groundwater management. Andhra Pradesh, India. Helped train NGO and research staff in fieldwork on running experimental games for collective action in groundwater management; advised on refining methods, particularly for community debriefing to enhance social learning, and supervised first week of field work.

Rural Development Specialist. March-June 2014. FAO-World Bank Technical Cooperation Program – Scaling Up Rural Development in Yemen. Institutional mapping of rural institutions: reviewed studies, interviewed experts and stakeholders, and prepared background paper and policy note.

Sociologist. April-May 2013. FAO-World Bank Technical Cooperation Program. Mekong Delta Water Management Rural Development Project in Vietnam. Assessed irrigation operation and

maintenance institutional arrangements and explored options for reorganization, community involvement, and interprovincial management.

Sociology/Institutional Specialist. October 2012-June 2013. World Bank. Irrigated Agriculture and Irrigation Systems Management Reform in Vietnam's Central Coast Region. Analytical and Advisory Assistance Study. Analyze institutional options for Irrigation Management Companies, assess farmers' knowledge, attitudes, and perceptions related to irrigation modernization, and prepare an indicative road map for institutional changes, as input for policy dialogue between the World Bank and local stakeholders.

Sociologist. October-November 2012. FAO-World Bank Technical Cooperation Program. Implementation Completion and Results Report for Groundwater and Soil Conservation Project in Yemen. Reviewed documents and held discussions with project staff and beneficiaries to assess achievement of project objectives.

Lead Consultant and Sociologist. June-December 2012. International Water Management Institute. Improving Sustainability of Impacts of Agricultural Water Management in Challenging Contexts. Developed an experience-based capacity-building program on community engagement in small-scale irrigation development.

Sociologist. February-June 2012. FAO-World Bank Technical Cooperation Program. Improving Agricultural Water Management in the Middle East and North Africa Region, World Bank. Policy review on trends, key issues and challenges on regional agriculture water management, lessons learned, and recommendations on technical, economic and institutional measures, and investment policies.

Resource Person. April 2012. Asian Development Bank. Prepared and presented paper on irrigation reform and institutional development for the Asian Irrigation Forum. Facilitated session and made recommendations on follow-up actions.

Social Scientist Consultant. March 2012. African Development Bank. Pre-Feasibility Study for Shire Valley Irrigation Project, Malawi. Conducted initial assessment of social conditions and potential social impacts, assessed needs and developed measures for stakeholder participation during the feasibility study, and drafted terms of reference for social impact assessment.

Sociologist. June, August 2011. FAO-World Bank Technical Cooperation Program. Pre-appraisal missions for Enhanced Water Resources Management Project in Egypt. Provided input on social aspects of project preparation, facilitated stakeholder consultation meetings, and drafted brief social assessment.

Sociologist/Water User Association Specialist. February-March 2011. World Bank. Identification Mission for Nigeria Irrigation and Water Resources Management Project. Assessed WUAs and help design project interventions to improve WUAs participatory role in irrigation management. Assessed land tenure issues and social assessment including options for improving participation, gender and resettlement, and drafted ToR for detailed social assessment.

Sociologist. May-July 2010. FAO-World Bank Technical Cooperation Program. Implementation Completion Mission for Sana'a Basin Water Management Project and Supervision Mission for

Groundwater and Soil Conservation Project. Reviewed social aspects of the projects, including the impact of public awareness campaigns on water scarcity, and sustainability of water user associations. Provided recommendations for Implementation Completion Report.

Visiting Scholar. August 2009 to May 2010. Workshop in Political Theory and Policy Analysis, Indiana University Bloomington. Research and publication on diversifying governance in commons, adaptive institutional artisanship, and finding better ways to share water.

International Consultant. July-November 2009. Groundwater and Soil Conservation Project. Yemen. Reviewed experience, internationally and in Yemen with water user organizations, assessed ways to involve WUOs in integrated water resources management, and prepared findings and recommendations for development of more sustainable community water management.

Writer and Editor. June-August 2009. Institute for Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore. Prepared background paper on "Water Governance as Problem-Solving" and edited proceedings for conference on New Thinking in Water Governance.

Institutional/PIM, Agronomy and Extension Specialist. June-September, October-December 2008. February-March, May 2009. MWH Consultants. Central Region Water Resources Project, Vietnam. Support for project implementation, particularly irrigation management enterprise reform and strengthening water user participation.

International Consultant. March-April 2009. Cambodia Development Research Institute. Review of Water Resources Management and Capacity Development Program.

Sociologist. April-May 2008. Oxfam-America. Independent review of Oxfam-America's Mekong River Basin Management Program. Assessed program achievements and opportunities and recommended options for future investment.

Sociologist. March-April 2008. Associates in Rural Development. USAID Land Tenure and Property Rights Course. Prepared and delivered presentation on water rights reform and acted as resource person for training course.

Sociologist and Water User Association Specialist. August-September 2005, January, June-July, August-September, November-December 2006, March-April, June-July, October-December 2007. Black & Veatch Co. Irrigation Component of Earthquake and Tsunami Emergency Support Project grant from Asian Development Bank. Poverty and social analysis for subproject preparation and participatory design and construction of irrigation rehabilitation in Nanggroe Aceh Darussalam and in Nias Island, North Sumatra, Indonesia.

Water Resources Specialist. October 2006, April-June 2007. June 2008. FAO/World Bank. Project preparation missions for a proposed Participatory Irrigation Development Project, Philippines. Reviewed project preparation feasibility study; met with beneficiaries, agency staff, and local government stakeholders; analyzed social and institutional issues related to irrigation management transfer, water user associations, and irrigation trust funds; and provided recommendations for aide-memoires.

Resource Person. April 2007. World Wildlife Fund. WWF Freshwater Ecoregion Workshop in Wuhan, China. Made presentation on "Will the Rivers Run Dry? Cases and Lessons for Negotiating Water Rights" and assisted discussions.

Rural Community Development Specialist and Team Leader. January-February 2007. Asian Development Bank - Vietnam Resident Mission. Central Region Livelihood Improvement Project. Independent Assessment, to assist the Mid-term Review Mission, to review the project design and workplans, analyze what is and is not working, and propose options for adjustments.

Social Aspects Specialist. March-May 2006. Black & Veatch Co. Asian Development Bank Technical Assistance for Preparation of Guiyang Integrated Water Resources Management in China. Carried out social assessment, including poverty and gender analysis, public consultation, and preparation of ethnic minority development framework and plans.

Legal and Institutional Expert. August-September, November 2004; February-March, June, October, November 2005; February-March 2006. Nippon Koei Co. Ltd. JICA Technical Assistance Study on Water Rights System Development in China. Analyzed institutional issues and options for water rights system development.

Sociologist and Resettlement Specialist. March-April, June-July, October 2004. DHV Consultants and Mott MacDonald Ltd. Asian Development Bank Technical Assistance for Preparation of a Project on Flood Management in Selected River Basins in Indonesia. Conducted social analysis, prepared participation strategy for project components, and updated land acquisition and resettlement framework.

Irrigation Management Transfer Specialist. April-May 2004. World Bank. Reviewed selected cases of irrigation management transfer by the Philippines National Irrigation Administration, analyzed problems, and formulated policy lessons regarding support for farmer participation in irrigation management.

Consulting Sociologist. January-February 2004. CARE Tajikistan. Prepared proposal for water user association strengthening project.

Editor. September 2003-October 2005. International Food Policy Research Institute. Co-edited manuscript on Water Rights Reform for publication.

Author and Rapporteur. January-March 2003. International Food Policy Research Institute. Coauthored lead paper. Prepared summary session report and synthesis paper for International Conference on Water Rights: Institutional Options for Improving Water Allocation held in Hanoi, Vietnam.

Editor. October 2002-March 2003. International Water Management Institute. Prepared proceedings of regional seminar on "Governance for Integrated Water Resources Management in a River Basin Context."

Contributing Editor. February 2002-February 2003. International Network on Participatory Irrigation Management. Prepared topic pages for the INPIM website: www.INPIM.org.

Sociologist and Poverty Specialist. Binnie, Black and Veatch International. March-July 2002. Asian Development Bank Technical Assistance for Preparation of a Participatory Irrigation Sector Project in Indonesia. Reviewed status of water user associations, including poverty, gender, and other social dimensions, and helped formulate project activities for irrigation management transfer, WUA empowerment, and other social and institutional aspects of project design.

Research Coordinator. January-May 2002. World Bank. Study of WUA Institutions, Irrigation Reform Impacts and Poverty in Indonesia. Assisted in preparing conceptual framework, methodology, and research instruments for a proposed study.

Resource Person and Editor. January-December 2001. International Water Management Institute. Participation in and preparation of proceedings for regional workshop on "Integrated Water Resources Management in a River Basin Context: Institutional Strategies for Improving Agricultural Water Management" held in Malang, East Java, Indonesia.

Sociologist. January 2000 – December 2001. Ford Foundation - New Delhi. Research and writing on "Enhancing Exchange Visits as a Learning and Networking Tool."

Sociologist and Irrigation Turnover Specialist. April-May 1999. November-December 2000. FAO/World Bank Cooperative Program. World Bank preparation missions for Natural Resources Management Project dealing with Chao Phraya Basin Water Resources Management. Reviewed legal, institutional, and technical issues affecting water user associations, irrigation service fees, stakeholder participation in basin management, and water rights in Thailand, and worked with other members of the team to formulate institutional aspects of project design.

Participatory Irrigation Management Specialist. February-March; July-August; September-October; and November-December, 1998. January-February, July-August 1999. January-February, September-October 2000. February-June 2001. World Bank missions for supervision of Java Irrigation Improvement and Water Resources Management Project, preparation and supervision of Indonesia Water Resources Sector Adjustment Loan, and preparation of National Water Resources Management Program Loan. Assessed progress in involvement of water user associations in project activities, sustainability of post-turnover management, revisions to irrigation service fee arrangements, and potential for further management transfer. Helped formulate institutional aspects of irrigation and water resources sector reforms and supervise preparation of new law and regulations and other aspects of implementation.

Author. October-November 1999. April, July-August 2000. Research and writing on social implications of emerging technologies, focusing on nanotechnology, intellectual property rights, sociology of innovations, and polycentric governance in technology development.

Consulting Sociologist. March-April, May-June 2000. CGAP-Consultative Group to Assist the Poorest. Microfinance market study with Government Savings Bank of Thailand. Assisted crossfunctional team to learn and apply participatory rapid appraisal and other research methods for microcredit product development.

Team Leader and Irrigation Sociologist. March, April 2000. COWI Consulting Engineers and Planners. Danida Support to Water Resources Management in Daklak Province, Vietnam.

Institutional review of the provincial irrigation sector. Formulated strategic recommendations for institutional reform and capacity building, including participatory groundwater and catchment management, and irrigation scheme transfer to water user associations.

Consulting Sociologist. December 1999. World Bank Rural Development Department. Acted as resource person and facilitator, and made presentations on post-turnover issues in irrigation governance, and on management of common-pool resources in irrigation and drainage, at the Fifth INPIM International Seminar in Andhra Pradesh, India, December 14-21, 1999.

Consulting Sociologist. September 1999. GRET-Groupe de Recherche et d'Echanges Technologiques and Action Nord Sud Cambodge. Development Support for Prey Nup Polder Rehabilitation. Assessed proposals for polder association development and made recommendations for improving project methodology and design of the polder association.

Irrigation Sociologist. June 1999. COWI Consulting Engineers and Planners. Danida Support to Water Resources Management in Daklak Province, Vietnam. Participated as a resource person in a needs assessment workshop and carried out a brief review of literature and recent experience with participatory irrigation management in Vietnam.

Consultant. January-June 1999. World Bank Institute. Revised design of website for the International Network on Participatory Irrigation Management (INPIM) and updated contents. Also represented INPIM at the Third National Workshop on Participatory Irrigation Management, May 10-15, 1999 in Danang, Vietnam.

Resource Person. March 1999. German Foundation for International Agricultural Development. DSE-MAF-MARD Workshop on "Government Actions Towards Effective Irrigators' Organizations" held in Vientiane, Lao PDR, March 1-6, 1999. Presented paper on "Making Irrigators' Organizations Creditworthy" and acted as panel discussant.

Consultant. May 1998. Economic Development Institute, World Bank. Advised on venue and field visits for a seminar of the International Network on Participatory Irrigation Management.

Editor. May 1997-December 1999. International Food Policy Research Institute. Co-edited book on "Negotiating Water Rights."

Institutional and Training Specialist. November-December 1996. March 1997. April 1998. DHV Consultants. Java Irrigation Improvement and Water Resources Management Project. Inventoried issues and formulated recommendations on sustainability of turning over small irrigation systems and improving participation in irrigation management.

Community Rural Development Specialist and Team Leader. May and September-October 1997. United Nations Development Program - Lao PDR. Formulated sustainable watershed management project emphasizing local resource governance for village forests, upland agriculture, and irrigation management transfer.

Rural Sociologist. January and April-May 1997. Cargill Technical Services. Asian Development Bank Technical Assistance for Stung Chinit Water Resources Development Project in Cambodia.

Assisted with initial social appraisal for irrigation scheme rehabilitation and potential storage dam construction, including consultation with beneficiaries and other affected persons.

Consultant. February and April 1997. Economic Development Institute, the World Bank. Reviewed experience and prepared a background paper for a national seminar on Participatory Irrigation Management in Vietnam.

Consultant. September-November 1996. Economic Development Institute, the World Bank. Reviewed experience and co-authored a background paper for a national seminar on Participatory Irrigation Management in Indonesia.

Team Leader and Sociologist. February-October 1996. Midas Agronomics. Asian Development Bank Technical Assistance, for the Telephone Organization of Thailand. Study of the socioeconomic impact of rural telecommunications in Thailand. Analyzed social impacts, evaluated economic benefits, and recommended ways to improve rural telecommunications services.

Rural Sociologist/Institutions Specialist. January 1996. Asian Development Bank. Technical Assistance fact-finding mission to assess social concerns and institutional capacity for an integrated river basin development project in eastern Indonesia.

Consultant Sociologist. June and September 1995. January, May, and September-October 1997. United Nations Capital Development Fund and United Nations Development Program. Assessed participatory mechanisms in rehabilitation of the Nam Tan irrigation perimeter in Laos and advised on follow-up activities by the project, including irrigation management transfer and participatory watershed conservation.

Consultant. January 1995-July 1999. The Ford Foundation. Periodic assistance to research on water allocation and water rights in Indonesia; strengthening legal status of water user associations, and establishing federations of water user associations. Planned and conducted study tour in Indonesia and Thailand for staff of Northern New Mexico Legal Services on community irrigation and water rights issues in 1995, and accompanied a return visit to New Mexico in 1996 by Indonesian and Nepali colleagues working on irrigation and forestry issues.

Sociologist. October-November 1994. March-April 1995. Asian Development Bank fact-finding and appraisal missions for a small-scale water resources development project in western Bangladesh, focusing on beneficiary participation and legal status of water user associations.

Rural Sociologist. November 1994-February 1995. United Nations Capital Development Fund project formulation mission, for a rural infrastructure development fund. Assessed local institutions and participatory planning methods for use by communes in development of rural infrastructure in Quang Nam Da Nang Province, Vietnam.

Sociologist, July 1993-October 1994. Asian Development Bank Technical Assistance for Improvement of Farmer Managed Irrigation Systems. Royds Garden Ltd. Development and pilot testing of methodology for assistance to locally managed irrigation systems, with farmer equity contributions. Synthesized methods from earlier projects, contributed to pilot testing, developed performance indicators, designed and supervised a study of the impacts of improvements to small

irrigation systems, and analyzed linkages between improvement of farmer-managed irrigation systems and basin water resources management.

Rural Sociologist. May-June 1993. United Nations Capital Development Fund mission to review impact of market-oriented reforms on operation and maintenance activities of district irrigation enterprises, farmers, and cooperatives in the Khe Tanh irrigation scheme, Quang Nam Da Nang Province, Vietnam. Worked with an agricultural economist and O&M engineer to make recommendations for strengthening O&M activities and cost recovery.

Sociologist. January-March 1993. USAID Small Scale Irrigation Management Project, Indonesia. Conducted comparative study of institutional changes in turnover of small irrigation systems to water user associations, irrigation service fee establishment in larger irrigation systems and management of an existing medium-scale scheme. Made recommendations on how to develop and sustain water user association activities in irrigation operation and maintenance for a newly developed irrigation system.

Senior Rural Sociologist. July-October 1992. DHV Consultants. Preparation of Java Irrigation Improvement and Water Resources Management Project. Assessed water user associations' status and needs in relation to turnover and irrigation service fee introduction. Drafted project components for turnover and irrigation service fee.

Consulting Sociologist. June 1992. International Irrigation Management Institute. Prepared framework for monitoring and evaluation of irrigation management transfer.

Sociologist. February-March 1992. Thai Development Research Institute. Gathered field information and analyzed problems and potentials of information technology in rural development, including village and subdistrict telephone service and computerization of government agencies and rural businesses.

Sociologist. June 1991-May 1992. Water Resources and Environment Institute, Khon Kaen University. Analyzed experience with participatory irrigation development in Southeast Asia, including turnover and agency-NGO collaboration. Made seminar presentations and wrote three papers which were subsequently published.

Institutional Advisor. November 1988-June 1991. Institute for Social and Economic Research, Education and Information (LP3ES). Development and institutionalization of participatory methods for the Indonesian Ministry of Public Works to improve and turn over of small irrigation systems to water user associations. Advised on institutionalization of participatory methodologies. Helped formulate regulations and guidelines for turnover. Developed information system for tracking implementation. Assisted institutional strengthening of LP3ES.

Water Resources Consultant. June-October 1988. Northeast Rainfed Agricultural Development Project, based in the Ministry of Agriculture Regional Office in Ta Pra, Khon Kaen, supported by USAID. Reviewed water resources development activities. Organized and documented a workshop for government officials to share and analyze experience with innovative technologies.

Research Advisor. Water Resources and Environment Institute, Khon Kaen University. June 1985-April 1988. Action research with the Royal Irrigation Department using community

organizers to improve local participation in the design, construction, and management of small weirs and reservoirs. Co-managed one evaluation and managed a second evaluation of small-scale water resources projects. Managed preliminary study of catchment water management. Consulted on village water supply development.

Peace Corps Volunteer. Population and Community Development Association. Mahasarakam, Thailand. 1979-1981. Helped organize and assess self-help construction of household rainwater tanks. Organized construction of biogas digesters.

PUBLICATIONS

From Tragedy to Win-win: Transforming Social Dilemmas in Commons. Presented at Celebrating Commons Scholarship Conference, Georgetown Law Center, Washington DC. October 5-6, 2018.

<u>Putting Polycentric Governance into Practice</u>. Presented at International Association for the Study of the Commons International Conference, Utrecht, Netherlands. July 10-14, 2017.

<u>Challenges of Polycentric Water Governance in Southeast Asia: Awkward Facts, Missing Mechanisms, and Working with Institutional Diversity</u> in Redefining Diversity & Dynamics of Natural Resources Management in Asia, Volume 1. pp 55-66. Elsevier. 2017.

Names for Games: Locating 2 × 2 Games. Games 2015 6(4) 495-520.

<u>Facilitating Self-governance: Possibilism and Pluralism in Citizen Co-creation</u>. Presented at International Association for the Study of the Commons International Conference, Edmonton, Alberta. May 26-29, 2015.

<u>Co-creating Water Commons: Civics, Environmentality, and "Power With."</u> Presented at the Society for Applied Anthropology Annual Meeting, Pittsburgh. March 24-28, 2015.

Common Pools and Common Knowledge: Coordination, Assurance, and Shared Strategies in Community Groundwater Governance. Presented at Governing Pooled Knowledge Resources, Second Thematic Conference on Knowledge Commons, New York University School of Law. September 5-7, 2014.

Water Commons and Information Commons: Combining Local Knowledge and Remote Sensing to Support Community Groundwater Governance. Presented at Society for Applied Anthropology Conference, Albuquerque, New Mexico. March 18-22, 2014.

Changing Commons: Diversity, Dynamics, and Design in the Elementary Landscape of 2x2 Games. Presented at Commoners and the Changing Commons: Livelihood, Environmental Security, and Shared Knowledge, 2013 Conference of the International Association for the Study of Commons, Mount Fuji, Japan. June 3-7, 2013.

Bureaucratic Bricolage and Adaptive Co-management in Indonesian Irrigation. In *The Social Life of Water in a Time of Crisis*. Edited by John Wagner. Berghahn Books. 2013.

Escaping Prisoner's Dilemmas: From Discord to Harmony in the Landscape of 2x2 Games. Presented at 23rd International Conference on Game Theory at Stony Brook University. July 15-19, 2012.

Irrigation Reform and Institutional Development. Presented at the Asian Irrigation Forum, Manila, Asian Development Bank. April 11-13, 2012.

Local Groundwater Governance in Yemen: Building on Traditions and Enabling Communities to Craft New Rules by van Steenbergen, Frank; Taher, Taha; Bruns, Bryan; Bamaga, Omar; Al-Weshali, Adel. *Hydrogeology Journal* 20 (6): 1177-1188. 2012.

<u>Visualizing the Topology of 2 X 2 Games: From Prisoner's Dilemma to Win-win.</u> 22nd International Conference on Game Theory, Stony Brook University. July 11 - 15, 2011.

Switching Games: Visualizing the Adjacent Possible in the Topology of Two-person Two-strategy Games. 2X2 Working Group Session 2, Canadian Economics Association, Ottawa. June 4, 2011.

<u>Informing and Enabling Local Ground Water Governance for Yemen</u>. Taha Taher, Bryan Bruns, Omar Bamaga, Adel Al-Weshali, and Frank van Steenbergen. National Conference on Management and Development of Water Resources in Yemen. January 15-17, 2011.

<u>Design Patterns for Customizing Irrigation Governance</u>. Sustaining Commons: Sustaining Our Future. International Association for the Study of Commons, Hyderabad, India. January 10-14, 2011.

<u>Transmuting Samaritan's Dilemmas in Irrigation Aid: An Application of the Topology of 2x2 Games</u>. International Association for the Study of Commons North American Meeting. Tempe AZ. September 30-October 2, 2010.

Working with Institutional Artisans: Co-evolutionary Visions and Multiple Roles for Practitioner Participation in Redesigning Commons. Presented at Society for Applied Anthropology. 70th Annual Meeting. Vulnerabilities and Exclusion in Globalization. Mérida, México. March 24-27, 2010.

<u>Metaphors and Methods for Institutional Synthesis</u>. Presented at the panel on Water Resource Governance and Design Principles. Workshop on the Workshop IV, Workshop in Political Theory and Policy Analysis, Indiana University Bloomington. June 3-6, 2009.

Institutional Design on the Edge of Chaos: Metaphors and Methods for Crafting Commons in Irrigation. Presented at the Panel on Water Governance for the Twenty-first Century: Engaging Indigenous and Non-indigenous Perspectives. Society for Applied Anthropology 69th Annual Meeting. Global Challenge, Local Action: Ethical Engagement, Partnerships, and Practice. Santa Fe, New Mexico. March 17 - 21, 2009.

<u>Aiding Adaptive Co-management in Irrigation</u>. Presented at Governing Shared Resources: Connecting Local experience to Global Challenges, International Association for the Study of the Commons. Cheltenham, England. July 14-18, 2008.

Social Engineering or Participatory Problem-solving? A Practitioner's Perspective on Opportunities for Irrigation Co-management. Presented at The Public Sphere and Engaged Scholarship: Challenges and Opportunities for Applied Anthropology. Society for Applied Anthropology. Memphis, Tennessee. March 26-29, 2008.

<u>Programmes.</u> In *Community-Based Water Law and Water Resource Management Reform in Developing Countries*, edited by B. Van Koppen, M. Giordano, and J. Butterworth, eds. Wallingford, UK: CABI. 2007.

<u>Irrigation Water Rights: Options for Pro-Poor Reform</u>. *Irrigation and Drainage:* Special Issue: Irrigation and Poverty Alleviation: Pro-poor Intervention Strategies in Irrigated Agriculture. 56 (2-3) (April – July) 2007.

Reconstituting Water Rights: Pathways for Polycentric Praxis. Presented at Survival of the Commons: Mounting Challenges and New Realities, International Association for the Study of Common Property. Bali, Indonesia. 2006.

Water Rights Reform: Lessons for Institutional Design. Edited with Claudia Ringler and Ruth Meinzen-Dick. Washington, D.C.: International Food Policy Research Institute. 2005.

Reforming Water Rights: Governance, Tenure, and Transfers. In Water Rights Reform: Lessons for Institutional Design, edited by Bryan Bruns, Claudia Ringer, and Ruth Meinzen-Dick. Washington, D.C.: IFPRI.

The Emergence of Polycentric Water Governance in Northern Thailand. Uraivan Tankimyong, Pakping Chalad Bruns, and Bryan Randolph Bruns. In *Asian Irrigation in Transition: Responding to Challenges*, edited by Ganesh Shivakoti, Douglas Vermillion, Wai Fung Lam, Elinor Ostrom, Ujjwal Pradhan, and Robert Yoder, New Delhi: Sage. 2005.

Routes to Water Rights. In *Liquid Relations: Contested Water Rights and Legal Complexity*, edited by Dik Roth, Rutgerd Boelens, and Margreet Zwarteveen, New Brunswick NJ: Rutgers University Press. 2005.

From Voice to Empowerment: Rerouting Irrigation Reform in Indonesia. In *The Politics of Irrigation Reform: Contested Policy Formulation and Implementation in Asia*, Africa and Latin America, edited by P. P. Mollinga and A. Bolding. Aldershot: Ashgate. 2004.

Strengthening Collective Action. Bryan Bruns and Pakping Chalad Bruns. In *Collective Action and Property Rights for Sustainable Development*, IFPRI 2020 Focus 11, edited by Ruth S. Meinzen-Dick and Monica Di Gregorio. Washington, D.C.: International Food Policy Research Institute. 2004.

Governance for Integrated Water Resources Management in a River Basin Context. Proceedings of a Regional Seminar, Bangkok, May 2002. Edited by Bryan Bruns and D. J. Bandaragoda. Colombo, Sri Lanka: International Water Management Institute. 2003.

<u>Water Tenure Reform: Developing an Extended Ladder of Participation</u>. Presented at Politics of the Commons: Articulating Development and Strengthening Local Practices, at Chiang Mai, Thailand, July 11-14, 2003.

<u>Participation in Nanotechnology: Methods and Challenges.</u> Presented at Information to Empowerment: A Global Perspective. International Association for Public Participation. Ottawa Canada, May 19-22, 2003.

Negotiating Transitions in Water Rights. Ruth Meinzen-Dick and Bryan Bruns. Water Resources Impact. March 2003.

Water Rights: A Synthesis Paper on Institutional Options for Improving Water Allocation. Bryan Bruns. Paper prepared for Proceedings of the International Working Conference on Water Rights: Institutional Options for Improving Water Allocation, February 12-15, 2003, at Baoson International Hotel, Hanoi, Vietnam. 2003.

<u>Frameworks for Water Rights: An Overview of Institutional Options.</u> Bryan Bruns and Ruth Meinzen-Dick. Presented at Water Rights: Institutional Options for Improving Water Allocation, February 12-15, 2003, at Baoson International Hotel, at Hanoi, Vietnam. 2003.

Integrated Water Resources Management in a River Basin Context: Institutional Strategies for Improving the Productivity of Agricultural Water Management. Proceedings of the Regional Workshop, Malang, Indonesia January 15-19, 2001, edited by Bryan Bruns, D. J. Bandaragoda, and M. Samad. Colombo, Sri Lanka: International Water Management Institute. 2002.

Water Rights and Legal Pluralism: Four Contexts for Negotiation. Bryan Bruns and Ruth Meinzen-Dick. *Natural Resources Forum* 25 (1): 1-10. 2002.

<u>Open Sourcing Nanotechnology Research and Development: Issues and Opportunities.</u>

Nanotechnology: Science and Technology of Nanostructures 12(3): 198-210. 2001.

Negotiating Water Rights. Edited by Bryan Bruns and Ruth Meinzen-Dick. London: Intermediate Technology Publications. New Delhi: Vistaar Division of Sage Publications, India. 2000.

Farmers, Factories and the Dynamics of Water Allocation in West Java. Bryan Bruns, Ganjar Kurnia and Teten Avianto. In *Negotiating Water Rights*, edited by Bryan Bruns and Ruth Meinzen-Dick. London: Intermediate Technology Publications. New Delhi: Vistaar Division of Sage Publications, India. 2000.

Nanotechnology and the Commons: Implications of Open Source Abundance in Millennial Quasi-Commons. Presented at Constituting the Commons: Crafting Sustainable Commons in the New Millennium, Eighth Conference of the International Association for the Study of Common Property. Bloomington, Indiana. May 31-June 4, 2000.

Water Tariffs and Participatory Irrigation Management: Some Perspectives. Presented at the Third National Workshop on Participatory Irrigation Management, Da Nang, Vietnam, May 10-15, 1999.

Making Irrigators' Organisations Creditworthy. In Irrigators' Organisations: Government Actions Towards Effective Irrigators' Organisations with special reference to Lao PDR and Vietnam. Edited by Charles L. Abernethy and Franz Heim. Feldafing: DSE-German Foundation for International Development. 1999.

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Incremental Rehabilitation: Restructuring Incentives for Irrigation Maintenance. Presented at the International Seminar on Participatory Irrigation Management, Bali, Indonesia. July 14-19, 1998.

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