

PROGRAM ON
WATER GOVERNANCE 

Annual Report 2012 & 2013



Program Overview

The Program on Water Governance (PoWG) conducts cutting-edge interdisciplinary research on water sustainability, and fosters dialogue on water policy with communities and decision-makers. PoWG is co-hosted by the University of British Columbia's Department of Geography and the Institute for Resources, Environment and Sustainability (IRES).



Who We Are

Dr. Karen Bakker, the co-Director of PoWG, is a Professor and Canada Research Chair at the University of British Columbia: www.karenbakker.org

Dr. Leila Harris, the co-Director of PoWG, is an Associate Professor in the Institute for Resources, Environment and Sustainability and in the Institute for Gender, Race, Sexuality and Social Justice.

Gemma Dunn is a Research Associate and Policy Outreach Coordinator with the Program on Water Governance

During 2012-2013, the PoWG research group included 8 Masters students, 6 PhD students, 2 post docs, 1 research associate and 4 research assistants
(<https://watergovernance.ca/about-us/powg-team/>)

Activities

The Program's activities reflect its outreach-focused mandate. We regularly host academic conferences and workshops, to which senior academics and policy makers are invited. PoWG publications include Working Papers, Briefing Notes, and Newsletters, all of which are available on our website: www.watergovernance.ca. Additional resources (such as interactive maps and databases) are also housed on the website and all these research materials are provided free of charge.

Message from the Co-Directors

The past year has witnessed a series of high profile water-related events—from the tragic losses experienced on the East coast of the U.S. due to Hurricane Sandy, to the heated debates over hydraulic fracturing (fracking) around the world, to the hopeful buzz of activity around the United Nation’s Year of International Water Cooperation. Water security has gained the attention of numerous governments worldwide—notably the US government’s Water Security Initiative, launched by Hilary Clinton.

At the Program on Water Governance, we remain strongly committed to conducting cutting-edge research on the world’s most pressing water issues. For example, our work on transboundary water governance (culminating in an edited book with University of Toronto Press), has been endorsed by Robert F Kennedy Jr as well as the Waterkeeper Alliance. Our work on water security was also featured as one of the plenary lectures at the 2012 meeting of the American Association for the Advancement of Science.

Among our other news, we have several new research and outreach activities associated with our involvement in two networks, the Water Economics Policy and Governance Network and Res’Eau Canada. We detail these activities, as well as our other projects in the pages of this report.

This report contains many more examples of the impact of our work—notably our twin contributions to cutting-edge research and to public debate. We invite you to learn more, and to get involved in one of our networks—through which you’ll be regularly updated with our latest research, policy publications, and events.

With warm thanks to our sponsors and funders: the Walter and Duncan Gordon Foundation, the Social Sciences and Humanities Research Council of Canada, the Natural Sciences and Engineering Research Council of Canada, Genome BC, and Genome Canada.

With our Best wishes,
Professor Karen Bakker and
Professor Leila Harris



Projects

Watershed Metagenomics Project

In January 2012, the Program on Water Governance joined an interdisciplinary team of research scientists from across Canada including BCCDC Public Health Microbiology and Reference Laboratory, Simon Fraser University and McGill University. The objective of the project is to develop new tests to enhance our capacity to understand water quality in our watersheds. Using metagenomics the project aims to 1) develop microbiome profiles to assess and compare communities of microorganisms (the microbiome consisting of viruses, bacteria and protists) in different watersheds and 2) use these profiles to create novel tests to detect pollution and identify the specific source of pollution.

Current drinking water testing collects samples from the tap, rather than at the source watershed, and testing for bacteria contaminants such as *E. coli*, often takes more than two days to complete. If a water supply has been contaminated, this processing time is simply too long as the water would already have reached people's homes. Additionally, these tests do not always reflect contamination of water by non-bacterial pathogens such as parasites or viruses. By applying metagenomics, a much more robust method that can identify many pollutants at once, this research will

improve current analysis methods by enabling faster testing at the watershed level. This simplified testing process will reduce days to hours, and provide profiles of all microbes present in a water sample rather than just *E. coli* bacteria. Furthermore, the test will characterize the "water profile" of a watershed, providing a picture of ecosystem health. Consequently, the new test is relevant for assessing both the safety of drinking water as well as the health of ecosystems.

As part of the GE3LS (Genomics and its Ethical, Environmental, Economic, Legal and Social Aspects) team, PoWG researchers are assessing stakeholder readiness for the uptake of these potential molecular water quality tests - identifying key challenges and opportunities for implementation. This research includes identifying, documenting and analyzing current microbial water quality risk assessment, management and communication practices in Canada (BC and Ontario).

This work was supported by funding from Genome Canada, Genome BC, Simon Fraser University Community Trust Endowment Fund and in-kind funding from the Public Health Agency of Canada.

For further information and/or project publications, please visit the project website:
www.watersheddiscovery.ca

Water Security Project

In 2008, the Canadian Water Network (CWN) awarded Dr. Karen Bakker (UBC) and Dr. Diana Allen (SFU) a four-year grant to lead a team of researchers from 8 Canadian universities, and 20 project partners from across Canada, on a project to improve water security in Canada. This project concluded in March 2012 culminating in the final project workshop held at the American Association for the Advancement of Science (AAAS) Annual Meeting in Vancouver in February 2012. This included presentations by top water security experts from several fields including Prof. Howard Wheeler (USask), Prof. Patricia Gober (Arizona State), Prof. Gordon Young (former UN WWAP Coordinator), Prof. Dennis Lettenmaier (U of Washington), Prof. Tom Pedersen (UVic), and Dr. Judy Isaac-Renton (BC CDC).

Research outputs included the creation of an indicator-based water security assessment method,, which integrates assessments for both water quality and quantity since both relate to human and ecosystem health. In addition, there were a total of 16 published peer reviewed journal articles, 5 policy reports and 39 presentations. Research highlights include:

Water Security: Risk and Society - a themed issue of Philosophical Transactions of the Royal Society A (2013)

Water Security: Principles, Perspectives

and Practices - co-edited book published by Routledge (2013)

Water Security: Research Challenges and Opportunities - journal article published in Science (2012)

Water Security: Debating an emerging paradigm - this journal article was published in Global Environmental Change (2012).

Recent Developments in Canadian Water Policy: An Emerging Water Security Paradigm - published in Canadian Water Resources Journal (2011).

Water Security Guidance Document: This is the final product of the four-year project, which was published in March 2012; it contains a broad range of information for both experts and non-experts. The document was developed for small communities to assess risk to water security in their watershed, but many of the concepts and issues are applicable at larger scales. The purpose of the Water Security Guidance Document is to:

Define the concept of water security, and document multiple perspectives on this concept (Part I)

Present methods for small water system managers to assess potential risks to water security (Part II)

Present possible responses to these risks, focusing on governance-based strategies (Part III)

For further information and/or project publications, please visit the project website:
www.watersecurity.ca

Rethinking Rivers Project

This Research Network focuses on creating global-local connections to foster a trans-national and inter-cultural understanding of how indigenous peoples and local settlers whose lives and livelihoods are intimately intertwined with the life of rivers and watershed regions (re)construct their past and (re)imagine the future of their social-ecological systems. This project is interested in how people make meaning and sense of place(s) through expressions of love, loss, lost memories, mourning and lament for the past, and hopes for an imagined future. This Network is led by our colleague Nora Angeles and is funded by the Institute of Gender, Race, Sexuality and Social Justice at UBC. The network aims to explore: How is it possible for our human community to generate individual, inter-personal, inter-community and collective forms of responsibilities and act upon empathy for our loss of kapwa (belongingness based on empathy for others), kinship, responsibility, biodiversity, and connections to nature? How can we critique our current responses and sense of responsibilities for our rivers and watersheds in light of the typical “tragedy of the commons” problem and long-term climate risks? How might our responses and responsibilities be (re)structured and (re)generated through the use of arts, culture and arts-based political practices? This focus connects to UBC’s mandate on global citizenship and socially relevant interdisciplinary research, and specifically to the Institute for Gender, Race, Sexuality and Social Justice’s mission and mandate to examine how intersectional analyses of race, class, gender, sexuality, ability, ethnicity, spirituality, and other axes of social difference shape the deep-rooted sources of injustice and what might progressive forces be able to do to advance individual and collective responsibility within social justice agendas, particularly through the use of arts, arts-based practices and cultural assets. Several researchers of the Program on Water Governance are involved in the Network and look forward to seeing what unfolds in the coming years.

For further information please visit: <http://www.grsj.arts.ubc.ca/social-justice-ubc-networks/> or follow the project via facebook or twitter at <https://www.facebook.com/rivernetworkGRSJ> and [@river_network](https://twitter.com/river_network)

CWGAR

Edges Comparative Water Governance in Urban Sites of Africa Research Project

The EDGES Comparative Water Governance in Urban Sites of Africa Research Project is a comparative and collaborative project based at UBC with partners at the University of Ghana in Legon and at the University of Western Cape, South Africa.

The project compares water governance trends in Cape Town, South Africa and Accra, Ghana, such as the effects of neoliberal policies and market instruments in the water realm (e.g. privatization, marketization, devolution, full-cost recovery measures), particularly for water access and participatory governance. With a strong qualitative focus, and emphasis on narrative, the comparative work focuses on issues related to the human right to water, as well as citizenship and democracy, to provide textured understandings of the lived effects and everyday experiences of water access and governance among marginalized communities.

For more information, please visit: <http://edges.sites.olt.ubc.ca/research/edges-comparative-water-governance-in-africa-research-project-cwgar/>

Urbanizing Watersheds: the Angat River Project

This project focuses on watershed governance through the case of the rapidly urbanizing Angat Watershed and River Basin (AWRB), located in Bulacan, Philippines. The AWRB is highly vulnerable to climate risks. This study analyzes the rescaling of water governance, as well as the prospects and possibilities of introducing collaborative governance to the “tragedy of the commons” problem in the AWRB’s governance. Although collaborative governance in natural resource management is understood as one of the possible ways forward, there are few attempts to undertake action research that focuses on designing, planning and implementing collaborative governance in multi-jurisdictional watersheds and river basins in the Philippines.

This study will lead to a longitudinal research program that links national and international partnerships; collaborative regional, provincial and municipal/local governance; institutional and civic capacity building in key watershed regions in the Philippines, beginning with the Angat Watershed and River Basin in Bulacan. This project hopes to build knowledge and understanding of the relationship between rescaled watershed governance and its institutional, social, economic, and environmental outcomes by:

- identifying and analyzing the system of relationships related to institution- and capacity-building imperative for collaborative governance to support both environmental sustainability and climate adaptation in urbanizing watersheds that span multiple jurisdictions and provide diverse resources and uses;
- generating insights about the kinds of collaborative action that could be taken by various stakeholders to strengthen collaborative governance and coordinate regulatory and other decisions at various scales;
- identifying the typologies of watershed stakeholder processes, means and ends objectives of various stakeholders at multiple scales, and the value-based performance measures for monitoring and evaluation of these decisions; and
- identifying and analyzing the effectiveness of the particular roles that universities, their action-researchers, and their international partnerships, currently play in assisting governments and civil society to build their capacity for collaborative governance in urbanizing watershed regions such as the Angat Watershed and River Basin.

For more information, please visit: <http://urbanizingwatersheds.org/>

Water Quality in BC First Nations communities

As part of the newly established SSHRC funded WEPGN: Water Economics Policy and Governance Network, the Program on Water Governance launched a new project (2013): Closing the Gap: Drinking water governance and monitoring capacity in British Columbia First Nations communities.

In B.C. and across Canada, many First Nations face significant challenges with respect to drinking water quality, and endure the health and related consequences of inadequate water and wastewater systems. With a growing trend in Canada of devolution of control over water monitoring and treatment to local-scale governance authorities, enhancing communities' capacity to assume these responsibilities and effectively assess and manage drinking water remains an urgent concern. First Nations governance processes are particularly complex, with a suite of legislation and federal institutions, as well as the broader context of self-governance important for

these communities. This situation raises important questions that we will research and address: How transparent, accurate and accessible is water monitoring data for British Columbia First Nations? How does data availability influence First Nations' self-governance in the water realm? Which factors, including funding arrangements and training programs, or broader governance considerations in the province, might enhance First Nations' capacity to govern and monitor drinking water supplies? Through approaching these questions, the research seeks to contribute to improved understandings of community-level water access/governance concerns; interactions with existing policies and programs; and First Nations' perspectives on priorities for enhanced water access and governance in British Columbia. The project's overarching aim is to contribute to improved capacity to deal with water quality changes in the context of self-governance in First Nations communities.

For more information, please visit: <https://watergovernance.ca/projects/water-in-canada/water-quality-in-bc-first-nations-communities/>

Metro Manila Water Privatization Project

Undertaken by doctoral candidate Philamer Torio, this research project will study the privatization of the Metropolitan Waterworks & Sewerage System [MWSS], the agency tasked to provide water and sewerage services for 16 million Metro Manila residents. Hailed as the largest privatization program in the world for a water utility, this program has had two private firms providing water services since 1997. Even as the Metro Manila water privatization and other similar programs have been acknowledged as successful endeavors in certain respects, there is still continuing debate on whether or not water privatization benefits the poor. Some literature suggests that they do derive benefits, citing increased access to safe and higher quality water. Others maintain that privatization programs are not pro-poor as marginalized consumers are usually the last to get connected to the system or even unable to get water connections at all.

This research aims to answer the following questions: 1) To what extent do different communities and areas in Metro Manila have the same opportunity in gaining ac-

cess to potable water from the system? and 2) With regard to water pressure, availability, quality, and affordability, what are the lived experiences of the different communities within the service area?

This project will employ the use of indicators, such as service coverage, water quality, and water supply availability, to investigate general patterns that prevail across the different socio-economic classes. Interviews with officials and representatives of MWSS, private concessionaires, NGOs, local governments, consumer organizations, and urban poor groups will be conducted to gain a better appreciation of major stakeholder viewpoints and assessments of this privatization program.

Existing literature on water privatization, water governance, human rights to water, Neoliberalism, benchmarking, and water privatization experiences will be reviewed to contextualize the results of the study. The broader context of results will include assessments of tariff structures, ability to access water, and changing quality of water for different communities.

RES'EAU WaterNET

WaterNET is an NSERC Strategic Network devoted exclusively to the objective of developing innovative and affordable solutions for providing drinking water to small, rural and First Nations communities. Through the Network, collaborators work on investigations with goals of: Characterizing Source Water Quality; Development of Innovative Treatment Solutions; Diffusion of Innovative Solutions. Focusing on water quality, the PoWG research will analyze, and provide recommendations for, improving governance capacity for drinking water security assessment in Canada. The work will focus primarily on small communities in British Columbia, the province with the highest number of Boil Water Advisories in Canada. Among our other goals, we will aim to provide an assessment of drinking water management systems, including data quality, availability and accessibility; and also provide a review of current risk management approaches compared with best practices approaches (Water Safety Plans) being developed internationally. Doing so will allow for an assessment of the governance barriers to more effective data collection, with emphasis on the relative degree of data access and availability.

More information on the Res'Eau project is available at:
<http://www.reseauwaternet.ca/>

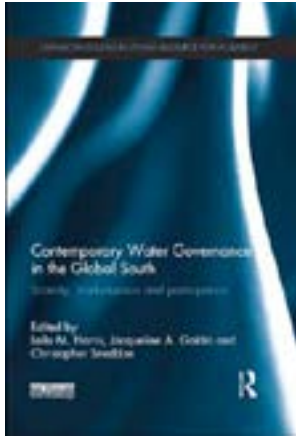
Gender and Water Pricing Project

As part of the Water Economics, Policy and Governance Network (WEPGN), PoWG researchers are working with colleagues at York University (led by D. Scott of the Osgoode Law School) to investigate gender dimensions of water pricing and other market instruments in the Canadian context. The project “Gender Implications of Putting a Price on Water” aims to explore the rise of water privatization and commodification in Canada, and their current or possible impacts on women in Ontario and British Columbia. Several focus groups have been carried out with diverse women from each province in order to understand their perspectives of, and experiences with public and private water management and control, and the effects that water costs, price signals, metering, as well as current trends in governance reform might have on their socioeconomic, political, ecological and cultural experiences.

The work will provide insights related to women’s particular perspectives and concerns related to different water governance instruments in the Canadian context.



Books



Harris, L., Goldin, J., Sneddon, C. (2013). **Contemporary Water Governance in the Global South: Scarcity, Marketization and Participation**. Routledge, London.

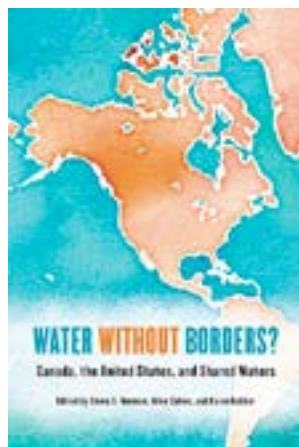
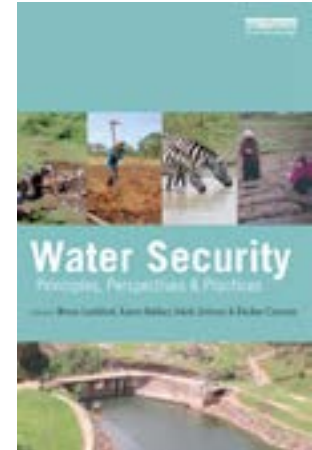
This book focuses on three major concepts and approaches that have gained currency in policy and governance circles, both globally and regionally—scarcity and crisis, marketization and privatization, and participation. It provides a historical and contextual overview of each of these ideas as they have emerged in global and regional policy and governance circles and pairs these with in-depth case studies that examine manifestations and contestations of water governance internationally.

Lankford, B., Bakker, K., Zeitoun, M. and Conway, D. (2013) **Water Security: Principles, Perspectives and Practices**. Routledge, London.

The purpose of this book is to present an overview of the latest research, policy, practitioner, academic and international thinking on water security – an issue that, like water governance a few years ago, has developed much policy awareness and momentum with a wide range of stakeholders. As a concept it is open to multiple interpretations, and the authors here set out the various approaches to the topic from different perspectives.

Key themes addressed include:

- Water security as a foreign policy issue
- The interconnected variables of water, food, and human security
- Dimensions other than military and international relations concerns around water security
- Water security theory and methods, tools and audits.



Norman, E.S., Cohen, A.C., and Bakker, K. (2013) **Water Without Borders? Canada, the United States and Shared Waters**. University of Toronto Press.

Water without Borders? is designed to help readers develop a balanced understanding of the most pressing shared water issues between Canada and the United States. The contributors explore possible frictions between governance institutions and contemporary management issues, illustrated through analyses of five specific transboundary water “flashpoints”. The volume offers both a historical survey of transboundary governance mechanisms and a forward-looking assessment of new models of governance that will allow us to manage water wisely in the future.



Academic Publications

Articles and Book Chapters

As a research organization, the Program is engaged in wider academic dialogues on water governance through publications. The following chapters and journal articles were published in 2012 and 2013. The articles address issues relating to our central research streams: Water in Canada, Water Security, US-Canada Transboundary Water, Water Development, and Water Privatization.

2013

Bakker, K. (2013). Constructing "public" water: The World Bank and water as an object of development. *Society & Space (Environment & Planning D)* 31(2), 280-300.

Bakker, K. (2013). Neoliberal versus Postneoliberal Water: Geographies of Privatization and Resistance. *Annals of the Association of American Geographers* 103(2), 253-260.

Bakker, K. and Morinville, C. (2013). The governance dimensions of water security: a review. *Phil. Trans. R. Soc. A* 371: 20130116 DOI:10.1098/rsta.2013.0116

Cook, C., Prystajeky, N., Ngueng Feze, I., Joly, Y., Dunn, G., Kirby, E., Özdemir, V. and Isaac-Renton, I. (in press). A comparison of the regulatory frameworks governing microbial testing of drinking water in three Canadian provinces. *Canadian Water Resources Journal* 38(3): 185–195 DOI:10.1080/07011784.2013.822186

Cook, C. and Bakker, K. (2013). Water security: A disputed concept. In B. Lankford, K. Bakker, M. Zeitoun, and D. Conway (eds) *Water security: Principles, perspectives and practices*, Earthscan, London.

Harris, L. and Roa-Garcia, M.C. (2013). Recent Waves of Water Governance: Constitutional Reform and Resistance to Neoliberalization in Latin America (1990-2012). *Geoforum* 50: 20-30.

Harris, L. (2013). Framing Piece on Marketization and Privatization of Water. In L. Harris, L., Goldin, J., and Sneddon, C. *Contemporary Water Governance in the Global South*, Routledge, London: 111-117.

Harris, L. (2013). Variable Histories and Geographies of Water Marketization and Privatization. In L. Harris, L., Goldin, J., and Sneddon, C. *Contemporary Water Governance in the Global South*, Routledge, London: 118-132.

Morinville, C. and Harris, L. (2013). Participation's Limits: Tracing the Contours of Participatory Water Governance in Accra, Ghana. In L. Harris, L., Goldin, J., and Sneddon, C. *Contemporary Water Governance in the Global South*, Routledge, London: 216-231.

Morinville, C. and Rodina, L. (2013). Rethinking the Human Right to Water: Water Access

and Dispossession in Botswana's Central Kalahari Game Reserve. *Geoforum* 49: 150-159.
Norman, E.S., Dunn, G., Bakker, K. Allen, D.A., and Cavalcanti de Albuquerque, R. (2013). Water Security Assessment: Integrating Governance and Freshwater Indicators. *Water Resources Management* 27(2): 535-551 DOI: 10.1007/s11269-012-0200-4

Norman, E.S. (2013). Who's counting? Spatial politics, ecocolonisation, and the politics of calculation in Boundary Bay Area. (*Royal Geographical Society*) 45(2): 179-187 DOI: 10.1111/area.12000.

Norman, E.S. (2013) *Water*. Annotated Bibliography in Geography, Warf, Barney (ed) New York: Oxford University Press.

Simms, R. B. (2013). Book Review: Mascarenhas, M. (2012). *Where the Waters Divide: Neoliberalism, White Privilege, and Environmental Racism in Canada*. *The International Indigenous Policy Journal* 4(3): 1-4.

Yates, J. S., & Bakker, K. (2013). Debating the 'post-neoliberal turn' in Latin America. *Progress in Human Geography*, On-line First. DOI:10.1177/0309132513500372

2012

Anderson, E., Findlater, K., Freeman, O., Levin, J., Morinville, C., Peloso, M., Rodina, L., Singh, G., Tesfamichael, D., Harris, L., and Zerriffi, H. (2012). Bridging Disciplinary and Professional Divides to Improve International Development Research at Universities. In Leal, W.(ed) *Sustainable Development at Universities: New Horizons*, Peter Lang Publishers, Frankfurt, Germany. 735-770.

Bakker, K. (2012). Water Security: Research Challenges and Opportunities. *Science*, 33(6097): 914-915. DOI: 10.1126/science.1226337

Cohen, A. (2012). Watersheds as boundary objects: Scale at the intersection of science, neoliberalism, and participation. *Environment and Planning A* 44(9): 2207-2224.

Cook, C., and Bakker, K. (2012). Water Security: Debating an emerging paradigm. *Global Environmental Change* 22(1): 94-102. <http://dx.doi.org/10.1016/j.gloenvcha.2011.10.011>

Harris, L. (2012). State as Socio-Natural Effect: Variable and Emergent Geographies of the State in Southeastern Turkey. *Comparative Studies of South Asia, Africa, and the Middle East* 32(1): 25-39.

Norman, E., Bakker, K. and Cook, C. (2012). Introduction to the themed section: Water governance and the politics of scale. *Water Alternatives* 5(1): 12 pp.

O. Miroso and Harris, L. (2012). Human Right to Water: Contemporary Challenges and Contours of a Global Debate, *Antipode* 44(3): 932-949.

Norman, E. (2012). Cultural Politics and Transboundary Resource Governance in the Salish Sea. *Water Alternatives* 5(1): 138-160.

Yates, J. S. (2012). 'Uneven Interventions and the scalar politics of governing livelihood adaptation in rural Nepal', *Global Environmental Change* 22(2): 537-546.

Outreach Activities

Outreach is a critical part of our mission, accordingly the PoWG team works to disseminate our research results, and raise awareness of water governance issues in Canada through workshops, events and various public speaking engagements.

Policy Publications

Cohen, A. (2012). *Understanding the implications of rescaled water governance: From jurisdictional to watershed boundaries*. GWF Discussion Paper, Global Water Forum, Australia. Available online at: <http://www.globalwaterforum.org/2012/12/02/understanding-the-implications-of-rescaled-water-governance-from-jurisdictional-to-watershed-boundaries/>

Dunn, G., Bakker, K., Norman, E., Allen, D., Cook, C., Cavalcanti de Albuquerque, R. and Simpson, M. (2013). *Water Security Indicators: The Canadian Experience*. Workshop Proceedings Paper – Global Water Partnership: Expert consultation on water security indicators.

Dunn, G. (ed) (2012). *Water Security Guidance Document*. Vancouver, BC: UBC Program on Water Governance.

Harris, L. and Morinville, C. (2012) *Moving Towards Participatory Water Governance in Accra, Ghana*. Center for International Governance Innovation Policy Brief. Available online at: http://www.cigionline.org/sites/default/files/AI_PB_7.pdf

Morales, M. and Öberg, G. (2012). *The Idea of Sewage as a Resource: An Introductory Study of Knowledge and Decision Making in Liquid Waste Management in Metro Vancouver, BC, Canada*. Vancouver, BC: Program on Water Governance.

Norman, E.S., Bakker, K. and Cook, C. (2012). *Water governance and the politics of scale: How thinking critically about scale can help create better water governance*, GWF Discussion Paper 1226, Global Water Forum, Canberra, Australia.

Norman, E.S. (2012) *Indigenous space, citizenry, and the cultural politics of transboundary water governance*. United Nations Global Water Forum, Discussion Paper 1248 November 2012.

Norman, E.S, Cohen, A., and Bakker, K. (eds) (2012). *Flashpoints and Collaboration: How problems can inspire innovative solutions for Canada, the US, and the governance of shared waters*. Vancouver, BC: Program on Water Governance.



Presentations & Speaking Engagements

Bakker, K. (2013). *Commons versus Commodities: Water Privatization and the Global Water 'Crisis'*. Rik Davidson/Studies in Political Economy Book Prize Lecture. University of Victoria, June.

Bakker, K. and Harris, L. (2013). *Debating Water-Related Equity: Views on community, citizenship, and belonging from political ecology to political economy and beyond*. University of California-Santa Cruz, Water Equity Workshop, February.

Bakker, K. (2012). *Privatizing Water: The Global Debate*. Reimagining Water Conference, Emily Carr University, March.

Bakker, K. (2012). *Panarchy, post-humanism, and environmental politics*. Annual conference of the Association of American Geographers. New York, February.

Bakker, K. (2012). *Critiquing the human right to water*. Workshop, Radcliffe Institute for Advanced Studies, Harvard University.

Bakker, K. (2012). *Political ecology and the marketization of water: Privatization, water grabbing, and alternatives to neoliberalism*. European Network on Political Ecology/European Summer School on Political Ecology. Autonomous University of Barcelona, Barcelona, Spain, July.

Bakker, K. (2012). *The future of water governance*. UNESCO-IHE. Delft, The Netherlands, June.

Bakker, K. (2012). *Water Privatization*. Plenary Lecture, Annual Conference of the American Association for the Advancement of Science, Vancouver, February.

Cohen, A. (2013). *When ecology is political: Variegated authority in Canada's community-based watershed groups*. Annual Meeting of the Canadian Association of Geographers. St. John's, NF, August.

Cohen, A. (2013). *The eco-scalar fix: Rescaling environmental governance and the politics of ecological boundaries in Alberta, Canada*. Annual Meeting of the Association of American Geographers. Los Angeles, CA, April.

de Freitas, C. (2013). *The ("Existential") Crisis of Governance in the São Francisco River Basin*. Session: Political Ecologies of the State. Organizers: K. Meehan, L. Harris. Association of American Geographers Annual Meeting, Los Angeles. March 2013.

de Freitas, C. (2012). *Old Chico's New Tricks: Governance in Brazil's São Francisco River Basin*. Session: Not-Quite-Neoliberal? Contesting Neoliberal Natures in Latin America. Organizers: A. Marston, C. de Freitas, K. Bakker. Association of American Geographers Annual Meeting, New York. February 2012.

Harris, L. (2013). *Water access, quality and microbial risk: Equity and Governance Perspectives*. Zoonoses and Emergence of New Infectious Diseases: Biology Meets Anthropology, College de France, Paris France, June 2013.

Harris, L. (panelist) (2013). *The Right to Water: Theories and Practices*. Association of American Geographers Annual Meeting, Los Angeles, April 2013.

Harris, L. (2013). *Multi-Scalar and Cross-Disciplinary Approaches towards Equitable Water Governance*. CGIRS National Science Foundation Workshop in Cultural Anthropology, University of California-Santa Cruz, February 2013.

Harris, L. (discussant)(2013). *Feminist Political Ecology of Rivers, Watersheds, Wetlands and Coastal Environments*. Association of American Geographers, Los Angeles, April 2013.

Harris, L. (2012). *Bodies, Technologies and Resources: Deepening Conversations on Gender and the Green Economy*. International Institute of Social Studies, The Hague, The Netherlands, November 2012.

Harris, L. (2012). *Water, Narrative, and Citizenship*. The Downstream: Reimagining Water, Emily Carr University, March 2012.

Harris, L. and Roa-Garcia, M.C. (2012). *Recent Waves of Water Governance: Constitutional Reform and Resistance to Neoliberalization (1990-2010)*. Association of American Geographers, New York, February 2012.

Harris, L. (2012). *Social and Political Dimensions of Water Use and Access*. Engineering Global Leaders Distinguished Lecture Series, UBC, March 2012.

Harris, L. (2012). *Gender matters for Environment and Development: past, present, and future tendencies*. International Development Research Network Scholars Café, UBC, December 2012.

Morinville, C. (2013). *The Ambivalence of Participation: Exploring Notions of Citizenship under Neoliberal Urban Governance*. Session: Examining the informal: connecting the fragmented city and urban water supply. Annual Meeting of the Association of American Geographers, Los Angeles, April 10, 2013.

Morinville, C. (2012). *Virtual Pipes: Water Access in Informal Settlements of Accra, Ghana*. Session: Geographies of Water Sharing II. Annual Meeting of the Association of American Geographers, New York. February 27, 2012.

Norman, E.S. (panelist)(2013). *Control of Water and Indigenous Societies: Setting Management Priorities in the Face of Cultural Conflict*. Annual Meeting of the Association of American Geographers, Los Angeles, CA, April 12, 2013.

Peloso, M. (2013). *Social Change @ The Edge*. Congress of the Humanities and Social Sciences, Victoria, BC, June 2013.

Wilson, N., Donovan, S., Toohey, R. and Inkster, J. (2013). *Integrating Indigenous Knowledge & Public Health Concerns into a Community Contaminant & Climate Change Monitoring Program*. International Symposium on Society and Resource Management, Estes Park, Colorado.

Yates, J. S. (2013). *Breeding change? Kamayoq and the 'technical extension' of alpaca breeding practices in the Peruvian Andes*. Annual Meeting of the Association of American Geographers, Los Angeles, California.

Yates, J. S. (2013). *Autochthonous development? The metamorphosis of kamay in the Peruvian Andes*. 8th Annual Critical Geographies Conference, Peninsula College, Port Angeles, Washington.

Yates, J. S. (2013). *Autochthonous development? The consecutive re-appropriation of kamayoq knowledge in practice in the Peruvian Andes*. Department of French, Hispanic and Italian Studies Graduate Conference Metamorphosis, UBC, Vancouver, Canada.

Transboundary Water Project Presentations

Bakker, K. (2013). *Water Without Borders*. CWRA Conference, March.

Bakker, K. (2013). *Transboundary Water Governance and the Columbia River Basin International Joint Commission Boundary Waters Canada-US*, University of British Columbia, February.

Norman, E.S. (presenter and panelist)(2013). *Water without Borders: Canada, the U.S. and Shared Waters*. Annual Meeting of the Canadian Water Resources Association (BC Branch), Vancouver, BC, March 7, 2013.

Norman, E.S. (presenter)(2013). *The Citizen, the State, and Environmental Governance: How citizen scientists and regional constructions are reshaping transnational water governance*. Association of American Geographers Annual Meeting, Los Angeles, CA, April 10, 2013.

Norman, E.S. (2012). *Re-framing transboundary water governance for, and by Native Communities: An analysis of shared governance and shared waters in the Yukon River Watershed and Salish Sea Basin*. Association of American Geographers Annual Meeting, New York City, NY, February 28, 2012.

Norman, E.S. (session discussant)(2013). *Borders, Nature, and Environmental Governance I and II*. Association of American Geographers Annual Meeting, Los Angeles, CA, April 10, 2013.

Norman, E.S. and Cohen, A. (2012). *Water governance at many Borders*. Authors Border Flows: A Century of Canadian-American Water Relations, London, Ontario, August 18, 2012.

Water Security Project Presentations

Bakker, K. (presenter) (2012). *Water Security: Competing Perspectives, Multidisciplinary Challenges*. Annual Conference of the American Association for the Advancement of Science. Vancouver, February.

Bakker, K. (2012). *Water Security and the Global Water Crisis*. Université Paul-Valéry Montpellier III CNRS ART-DEV., Montpellier, France, June.

Bakker, K. (2012). *Water security and the global water 'crisis'*. Colloquium. Department of Geography and Development/Institute of the Environment, University of Arizona, October.

Bakker, K. (2012). *Water security and the global water 'crisis'*. Colloquium. Department of Geography. University of Oregon, October.

Cook, C. (oral presentation) (2012). *Water security: Debating an emerging paradigm*. The Securitization of Water Discourse, and International Conference of the EU CLICO Project. YMCA Three Arches, Jerusalem, Israel, December 17-20, 2012.

Cook, C. (oral presentation on behalf of project team) (2012). *Approaching Water Security from a Risk Perspective*. Water Security, Risk and Society: International Water Security Conference, Oxford University, UK, 16-18 April 2012.

Dunn, G., Bakker, K., Norman, E., Allen, D., Cook, C., Cavalcanti de Albuquerque, R. and Simpson, M. (oral presentation) (2012). *Water Security Indicators: The Canadian Experience*. Global Water Partnership Expert Consultation on Water Security indicators, Stockholm, Sweden, November 20-21, 2012.

Water and Development Project Presentations

Harris, L. (2013). *Engaging Ecological Citizenship: Water access, rights, and citizenship in comparative perspective (Accra, Ghana and Cape Town, South Africa)*. RGS-IBG Royal Geographical Society Institute of British Geography Ecological Citizenship in the Global South. London, UK, August 2013.

Harris, L. (presenter), Goldin, J.A., Darkwah, A., Morinville, C. and Peloso, M. (2013). *Intersections of Gender and Water: Comparative approaches to everyday negotiations of water access in underserved areas of Accra, Ghana and Cape Town, South Africa*. Congress of the Humanities and Social Sciences, Women's and Gender Studies et Recherches Feministes Conference. Victoria, Canada, June 2013.

Harris, L. (2012). *Social and Politics Aspects of Water Use and Access in Developing Countries*. Environmental Engineering Group, UBC, November 2012.

Harris, L. (2012). *The Other Side of Green: Difference and Otherness in Environmental Narratives of Contemporary Turkey*. Anthropology of Water Research Group, University of Western Cape, July 2012.

Harris, L. (2012). *Water Governance and Access in the Global South: Advancing the Research Agenda*. Roundtable on Water Governance and Resilience, Interdisciplinary Center for the Study of Global Change, Minneapolis, MN, November 2012.

Peloso, M. (presenter), and Morinville, C. (2012). *Individual Imperatives in Ashaiman, Ghana: What is the Role of the Informal Water User?*. Water Alternative Informal Urban Waterscape Workshop, UNESCO-IHE, Delft, The Netherlands. December 5, 2012.

Rodina, L. (2013). *"Why are you here, umlungu?" Doing fieldwork in the slums of Cape Town, South Africa*. International Development Research Network Field Debrief, Liu Institute for Global Issues, UBC, Vancouver, BC, Feb 15, 2013.

Rodina, L. (2013). *Human Right to Water and Water Services in the Context of Informal Settlements in Cape Town, South Africa*. Water: A Thirst for Justice, 6th Annual Community Movements Conference, Peterborough, ON, February 1-3, 2013.

Rodina, L. (2013). *Challenges for Research in Water Access and Governance and the Human Right to Water in South Africa*. Peter Wall Institute for Advanced Studies University-Based Institutes for Advanced Study (UBIAS) Conference, Vancouver, BC, Sept 17-19, 2013.

Water in Canada Project Presentations

Dunn, G., Harris, L. (presenter) and Bakker, K. (presentation) (2013). *Factors that facilitate and constrain microbial risk governance in British Columbia and Ontario, Canada*. AWWA 2013 Water Quality Technology Conference, Long Beach, California, USA, November 3-7th.

Dunn, G., Harris, L. (presenter) Cook, C. and Prystajecky, N. (presentation) (2013). *A comparative analysis of microbial water quality risk assessment and management practices in British Columbia and Ontario, Canada*. CMOS / CWRA Scientific Congress, Saskatoon, May.



Research Team



Professor Karen Bakker

Karen Bakker (Ph.D. Oxford, B.A.& Sc. McMaster University) is a Professor in the Department of Geography, a Canada Research Chair, and the Director of the Program on Water Governance at the University of British Columbia.

Committed to interdisciplinary, Dr Bakker collaborates with natural, social and medical scientists across a range of disciplines. Her current research focuses on water governance, the political economy of environmental change, and environmental politics. She has published research in geography, urban studies, development studies, and environmental studies, as well as water specialist journals. Dr Bakker also regularly acts as an advisor to governments, NGOs, and international organizations.

Dr Bakker is the recipient of numerous awards, including a Rhodes Scholarship and a Canada's Top 40 under 40 award.



Dr. Leila Harris

Leila Harris (PhD and MA Geography, University of Minnesota-Twin Cities, BA University of California-Berkeley) is an Associate Professor with the Institute for Resources, Environment, and Sustainability (IRES) and the Institute for Gender, Race, Sexuality and Social Justice at UBC.

Her current research focuses on the intersection of environmental issues and inequality / social difference (especially gender and ethnicity), water governance (particularly issues associated with ongoing neoliberalization shifts, particularly in several African contexts), and water politics and conflict (particularly in the Middle East and Turkey). She also works broadly on other issues related to water justice and governance, including newer projects on first nations water governance in Canada.



Dr. Alice Cohen

Alice is an Assistant Professor at Acadia University, and remains affiliated with the POWG in her role as an Alumni. She graduated from the IRES doctoral program in December 2011, where her dissertation - entitled *From Water to Watershed* - focused on rescaled water governance initiatives in Canada. Alice is a former Gordon Foundation water policy fellow, and during her time at UBC was a scholar in the Liu Scholar Program. Following her Ph.D., she held a SSHRC Postdoctoral fellowship at Clark University.

Drawing on debates at the intersection of environmental geography and scale, her current work looks at the politics of ecosystem boundaries. To that end, she has published in *Water Alternatives*, *Environment and Planning A*, and *Environment and Planning D*. She is co-editor of *Water Without Borders: Canada, the US, and Shared Waters* as well as *Negotiating Water Governance: Why the Politics of Scale Matter*, and has an ongoing role as a reviewer for journals in geography, political science, and environmental studies.

She is an Assistant Professor at Acadia University, where she teaches in both the Earth & Environmental Science department and the Environmental & Sustainability Studies program. For more information and an updated list of publications, see <http://ees.acadiau.ca/cohen.html>.



Dr. Christina Cook

Christina joined PoWG in 2007; she has worked on the "Water Security Framework" and the "Water in Canada" (Delegated Governance, and Municipal Infrastructure) projects.

Christina completed her Ph.D. in Resource Management and Environmental Studies in December 2011. Her dissertation, entitled *Putting the pieces together: Tracing jurisdictional fragmentation in Ontario water governance*, examined the challenges of jurisdictional fragmentation and multi-level governance in water. Prior to commencing her doctoral studies, Christina practiced law at a large full service western Canadian firm and worked in project finance in the resources sector in the Middle East.

In 2012, Christina worked as a Research Associate in the Faculty of Medicine at UBC at the BC Centre for Disease Control on the Watershed Metagenomics multi-disciplinary project regarding the development and regulation of molecular tests for microbial water quality. Christina works on scale in water governance, intersections of land and water governance (including source protection), and desalination governance. She is co-editor of *Negotiating Water Governance: Why the Politics of Scale Matter* and she is a regular peer reviewer of articles submitted to journals in geography and environmental studies. Christina is currently a Postdoctoral Fellow in the Department of Geography at the Hebrew University of Jerusalem, Israel.



Dr. Emma S. Norman

Dr. Emma S. Norman (PhD, Geography, University of British Columbia; MS Western Washington University, and BA, Colby College) is an Assistant Professor of Geography at Michigan Technological University with the Environmental and Energy Policy Program. Dr. Norman's affiliation with the PoWG began as doctoral student in Geography (2003-2009), continued as postdoctoral fellow (2009-2011), and remains active as PoWG alumni.

Dr. Norman's research interests are at the nexus of environmental and political geography, with a particular interest in water governance, border studies, and environmental justice. She has worked closely with Aboriginal communities (particularly Coast Salish communities) for the past 15 years, looking at issues related to improved water governance, advocating for water rights, and decolonizing practices.

Dr. Norman has published in a wide range of journals including the *Annals of the Association of American Geography*, *Geoforum*, *Water Alternatives*, and *Water Resources Management*. She has three book projects – the recently released: *Water without Borders?: Canada, the U.S. and Shared Waters* (co-edited with Dr. Cohen and Dr. Bakker); *Negotiating Water Governance: Why the Politics of Scale Matter* (co-edited with Dr. Cook and Dr. Cohen, and forthcoming with Ashgate) and *Transboundary Water Governance: Canada, the United States and Indigenous Communities* (forthcoming with Routledge Press). She recently has been invited to present her research at Stanford, UC Berkeley, and the University of Nevada-Reno.



Gemma Dunn

Gemma joined PoWG in 2008 as a research associate and the policy outreach coordinator for the CWN funded water security project and, more recently, Watershed Metagenomics. Her research focuses on identifying key challenges and opportunities for implementation of the new microbial water quality monitoring tests derived from genomics and metagenomics based research. This includes identifying, documenting and analyzing current microbial water quality assessment, management and communication practices in Canada (BC and Ontario). Her research has been published in several journals including *Science of the Total Environment* and presented at Canadian Water Resources Association (CWRA) and American Water Works Association (AWWA) conferences.



Dr. Maria Cecilia Roa Garcia

Dr. Roa is a post-doctoral researcher studying the way in which the principles of equity and efficiency permeate water policies and regulations in five Andean countries: Bolivia, Chile, Colombia, Ecuador and Peru; in what practical ways they are sought after, what evidence there is of their fulfillment, and whether there is enough information to monitor their performance. With an inter-disciplinary background, BSc in Industrial Engineering (Universidad Javeriana), a MSc in Development Studies (London School of Economics) and a PhD in Resource Management, Environment and Sustainability (University of British Columbia) she uses participatory approaches to involve rural communities in research for development projects, and combines biophysical and social sciences to understand local issues. She has lead and co-lead research on community management of watershed resources in Colombia, Bolivia, Ecuador, Peru, Honduras and Nicaragua.

Dr. Roa's work has contributed to the understanding of the role of land use and soils in the regulation of water flows in Andean catchments and the implications for water scarcity. Locally in Colombia, she leads a project on the use of locally generated data about water sources (biophysical) and the situation of community water organizations (socio-economic) at seven pilot sites, for local management of water and climate change adaptation.



Elizabeth Koryoo Dapaah

Elizabeth Koryoo Dapaah is an MA student coming from Ghana, West Africa. She will be conducting her research under the supervision of Dr. Leila Harris and is looking into a comparative study of Water Governance, Delivery and Access among Indigenous and Migrant Low Income Communities in the Greater Accra Metropolitan Area (GAMA). Her work seeks to question how water use and access is connected with governance and broader socio-political processes within the city. Specifically, it will explore how migrant and indigenous poor communities negotiate access to water and the role of informal networks and institutions in this regard. She has a Bachelor of Arts Degree (Hons.) in Geography and Resource Development with Political Science from the University of Ghana, Legon and a certificate in Disaster Risk Reduction in Urban Areas and Community Information Base for Environmental Management (EHM) and Disaster Risk Reduction from the same University. Before her enrollment in UBC, she worked as a Research Assistant on National Service with the University of Ghana, Department of Geography and Resource Development. She has sponsorship from the Ghana Education Trust Fund (GETFund) to enable her pursue her Master's Degree.



Corin De Freitas

Corin is a second-year Ph.D. student in the Department of Geography at UBC. Her doctoral research focuses on water governance and socio-environmental change, justice, and difference in the Northeast of Brazil. Her M.A. research centred on the role of economic instruments in changing modalities of decision making in Brazilian shared water governance settings. In 2010, Corin also completed a Fulbright Fellowship in Belo Horizonte, Brazil, where she studied decision making dynamics surrounding a civil society-led river revitalization project called Meta2010. Corin received a B.A. from Smith College with majors in Government (Hon) and French Language and Literature. Her Government honours thesis examined the legal and political dimensions of several approaches to addressing conflicts involving in-stream flows in the state of Colorado. Before coming to UBC, she worked in government and elected politics.



Andrea Marston

Andrea is a Master's student in Geography. Her M.A. research examines multiple uses of domestic and irrigation water in Cochabamba, Bolivia. She is looking specifically at the degree to which peri-urban residents use domestic water for "productive" purposes, and how these activities are affected by increased urbanization and expanding city limits. Andrea is also continuing a research project that she began as an undergraduate that examines certification processes for Fair Trade crafts in relation to the needs and resources of rural craftswomen in Latin America. Andrea graduated from Duke University in 2009 with a B.A. (Hon) in International Comparative Studies and Environmental Science and Policy. Her past research experience has taken her to Panama, Mexico, Ecuador, and Argentina, and has focused mostly on craft-based livelihoods and gendered resource access.



Cynthia Morinville

Cynthia completed a Masters of Arts under the supervision of Dr Leila Harris at the Institute for Resources, Environment and Sustainability (IRES) in September 2012. Based on five months of fieldwork, her thesis titled 'Beyond the pipe: participation and alternative water delivery in underserved areas of Accra, Ghana' examined various government-sanctioned participatory approaches to water management as well as more grassroots measures seeking to increase water access in underserved areas of the Ghanaian capital. Following her graduation, Cynthia maintained an affiliation with IRES and the Program on Water Governance where she worked as a Research Assistant on a project looking at water governance and water security as well as on the EDGES' Comparative Water Governance in Africa Research Project. She is currently taking part in Next Up - Ottawa.

Cynthia's research interest include community engagement, participation and negotiation around resource access, as well as implications of these for questions of subjectivity, agency, citizenship and democracy.

Cynthia previously completed a B.A (Hon) in Environmental Studies and International Studies from York University in 2009, as well as a Certificate in Communication and Media Studies from Université du Québec à Montréal in 2010.



Megan Peloso

Megan is a MA student under the supervision of Dr. Leila Harris at IRES. She is also a member of the EDGES research collaborative (Environment and Development: Gender, Equity and Sustainability) and IDRN (International Development Research Network). The focus of her thesis research is on water access and governance in urban Ghana, where she conducted fieldwork in the summer of 2012. Megan holds a Bachelor of Social Sciences with Honors in International Development and Globalization from the University of Ottawa (2009).



Lucy Rodina

Lyudmila (Lucy) Rodina is a PhD student the Institute for Resources, Environment and Sustainability (IRES). Lucy did her MA at IRES with Dr. Leila Harris, working on water governance and the human right to water in South Africa. Lucy's Masters research investigated the lived everyday experiences of residents of informal settlements in Cape Town with water access and policies that realize the human right to water. She has a BA in International Relations from the University of British Columbia (2010)

Before starting her Masters, Lucy was involved in a water development project in Nepal. In 2010, during two volunteer trips, she worked with a local village development committee in Lahachawk, Nepal, in building irrigation canals and shaping strategies for future water development projects. Currently, Lucy is a Steering Committee member of the International Development Research Network at UBC and a member of the EDGES research collaborative. She is also a social media intern for the Water Ethics Network.



Sameer H. Shah

Sameer is a Masters student in Resource Management and Environmental Studies. He is conducting his research under the supervision of Dr. Leila Harris and Dr. Hisham Zerriffi.

Sameer graduated with a Bachelor of Environmental Studies (Hons. Co-op) from the University of Waterloo in 2012. He has two years of interdisciplinary experience designing and developing global corporate social and environmental policy and public natural resource management policy in Canada and India. In Ontario, Sameer was a key component in the environmental and technical approval assessment process for 100 MW of renewable energy. He has held both NSERC and SSHRC Research Awards.

His interests involve the sustainable development of river basin systems in developing countries. More specifically, Sameer is interested in understanding the interrelationships and interdependencies between ecology, livelihoods, culture, social structure, and gender in social-ecological river-basin systems using systems, resilience and complexity frameworks to inform desirable development policy and projects.



Rosie Simms

Rosie is a MA student working under the supervision of Dr. Leila Harris. Her research is focused on water access and governance for First Nations in British Columbia. This project is part of the Water Economics Policy and Governance Network. Rosie holds a BA&Sc (Hons) Environment degree from McGill University, where her interests converged around Canadian freshwater issues and environmental justice.



Marc Tadaki

After completing his MSc in Geography at the University of Auckland in 2012, he worked as a researcher for the Association of Pacific Rim Universities (Singapore), the Cawthron Institute and Massey University (both in New Zealand). His MSc analysed a collaborative freshwater governance process in New Zealand, drawing attention to the value-commitments embedded within the very framing of the process itself.

Marc's PhD project will seek to understand how national freshwater planning reforms in New Zealand are rolling out in situated ways, reflecting a range of locally contingent framings, values, resources and capabilities. By understanding the situated politics of these freshwater reforms, the project can contribute to building capability within the freshwater planning sector to enable reflexive learning and encourage open and deliberative discussion about what is at stake in the reforms themselves.

Marc is a Research Associate with the Cawthron Institute in New Zealand (starting 2013, until 2017), and a collaborator on the Freshwater Values, Monitoring and Outcomes (FVMO) project, led by Landcare Research.



Phil Torio

Phil Torio is a PhD candidate in Resource Management & Environmental Studies at the Institute for Resources, Environment and Sustainability. He is undertaking an in-depth study of the Metro Manila water privatization to determine whether or not poor households have benefited equitably from the program. To support the narratives of existing literature on the subject matter, Phil will establish a set of indicators and design a framework using such indicators to assess water poverty in urban water systems. The research will afford a better understanding of the state of consumer welfare and equitable access to water, sixteen years after commencement of the privatization program. Moreover, the findings of the research will inform policy and regulatory practices with regard to future private sector participation in the provision of water and other basic services

Prior to his PhD studies, Phil was the Executive Director of the Public-Private Partnership Center of the Philippines, the government agency tasked to facilitate private sector investment in public infrastructure. In the private sector, he has built an extensive career in project and corporate finance, business development and project management. He has post-graduate degrees in multiple disciplines, a Master of Arts in Asia Pacific Policy Studies from the University of British Columbia, a Master in Public Administration from Harvard University, a Master in Management from the Asian Institute of Management, and a Master of Engineering from the University of the Philippines. He obtained his Bachelor of Science degree in Mechanical Engineering from the University of the Philippines



Nicole Wilson

Nick is a first year of her PhD in Resource Management and Environmental Studies in the Institute for Resources, Environment and Sustainability. She will be working under the supervision of Dr. Terre Satterfield and Dr. Leila Harris. Prior to coming to UBC, she completed her Master's of Science in Natural Resources at Cornell University with minor concentrations in Water Resource Management and American Indian Studies. Her MS research examined the impacts of climate change on the subsistence livelihoods of the Koyukon Athapaskan people of Ruby, Alaska. Her MS research was supported by funding from the Doris Duke Conservation Fellowship and the Arctic Institute of North America. She also holds a BA in Development Studies from the University of Calgary.

Nick's dissertation research will focus on risk perceptions, Indigenous knowledge and the role of First Nations in water governance. She holds a strong interest in conducting participatory community-based research. For her dissertation research she will work with the Yukon River Inter-tribal Watershed Council – A grassroots Indigenous organization comprised of 70 Alaska Native and Canadian First Nations communities. Her research will build on a multi-disciplinary research, initiated in 2012, that examines the impacts of climate change and contaminants on water for six Yukon First Nations.



Julian Yates

Having graduated in 2004 from the University of Manchester (UK) with a geography degree (BA Hons), Julian worked in the international development sector for the UK-based international NGOs of Practical Action and the International HIV/AIDS Alliance. He followed this by completing an MA in geography at the University of Victoria, and working as a research assistant for the Participatory Sustainable Waste Management project. Most recently, Julian carried out research for Practical Action in relation to livelihood adaptation to climate change in rural Nepal. At UBC, Julian will be working with Dr Karen Bakker on issues of resource governance in Latin America, paying particular attention to the ways in which indigenous rural communities in the Andes are adapting their livelihoods and resource-management regimes in response to changing governance contexts.



Zamyla Chan

Zamyla is a Canadian student studying engineering sciences and computer science at Harvard College with a special interest in water and renewable energy.



Judy Li-Hsin Chang

Judy is a 4th year Environmental Sciences student with a focus in Land, Air, and Water and currently the Research Assistant for PoWG. She is interested in contaminated soil and groundwater remediation and water management.



Helen Lui

Helen, a senior undergraduate student at the University of British Columbia, joined PoWG in January 2011 as a research assistant. Having completed an English language major, she is currently pursuing a second major in Geography in the Environment and Sustainability program. She is currently researching issues related to water quality, governance and enforcement in Canada.



Maggie Low

Maggie Low is a PhD student in the department of Resource Management and Environmental Studies at UBC. She is interested in the intersection between First Nations rights and natural resource management in Canada.



Andrea Reid

Having recently graduated from the University of British Columbia with a Bachelor of Arts in First Nations Studies, Andrea spent the summer assisting Rosie Simms with her research concerning water governance in First Nations communities. Committed to decolonization and interested in the role of community in initiating and supporting change, Andrea was excited to contribute to a project that is seeking to transform relations on a political and ecological level and enjoyed being a part of the research process.

Ongoing Advisory Roles

The PoWG team members also serve in a variety of advisory roles, these are an essential part of fulfilling our mandate, to support informed public debate over water resources in Canada and around the world.

Karen Bakker National - Peter Wall Institute Arts-Based Conceptions of Water Award, Adjudication Committee (2013)

Senior Editor, WIREs Water (an interdisciplinary water journal published by Wiley) (2012 – present)

Gemma Dunn International - Organisation for Economic Cooperation and Development (OECD) Water Governance Initiative (Jan 2013 – ongoing)

International - Global Water Partnership: Expert Consultation on Water Security Indicators (Nov 2012 – Jan 2013)

Leila Harris Reviewer for University of Georgia Press, SSHRC, US National Science Foundation, and for numerous journals

Awards

- Karen Bakker "Water Champion" Water's Next, PEOPLE category (2012)
Rik Davidson/Studies in Political Economy Book Prize (2012) for her book Privatizing Water
- Leila Harris UBC Peter Wall Institute for Advanced Studies Visiting Scholars Abroad Award for work in South Africa
- Lucy Rodina SSHRC Doctoral award (2013)
UBC Graduate Student International Research Mobility Award (2012)
- Rosie Simms SSHRC Joseph Bombardier Award (2013)
- Phil Torio Doctoral Research Award given by the International Development Research Centre (2013)
Professional Degree Award for Mechanical Engineering given by the University of the Philippines College of Engineering and the UP Alumni Engineers (2012)

Coming Soon

Articles

Bakker, K. and Morinville, C. (in press). The Governance Dimensions of Water Security: A review. *Philosophical Transactions of the Royal Society A*.

Cohen, A. and Bakker, K. (in press). Rescaling water governance. *Environment and Planning D: Society and Space*.

Cohen, A. and Harris, L. (in press). Performing Scale: Watersheds as 'Natural' Governance Units in for M. Glass and R. Rose-Redwood (eds). *Performativity, Space, Politics* Routledge.

Dunn, G., Harris, L., Cook, C., Prystajecy, N. (2014) A comparative analysis of microbial water quality risk assessment and management practices in British Columbia and Ontario, Canada. *Science of the Total Environment* 468-469: 544-552. DOI: 10.1016/j.scitotenv.2013.08.004. Available online (August 2013) Open Access: <http://www.sciencedirect.com/science/article/pii/S0048969713009182>

Harris, L. (In press). Imaginative Geographies of Green: Environmental Narratives and Socio-spatial Difference in Contemporary Turkey. *Annals of the Association of American Geographers*.

Morinville, C. and Harris, L. (accepted) Participatory Water Governance in Urban Contexts: The case of Accra's Local Water Boards *Ecology and Society*.

Morinville, C. and Harris, L. (accepted). 'Participation, Politics and Panacea: Exploring Participatory Water Governance in Accra, Ghana'. *Ecology & Society*.

Norman, E., Cohen, A., and Bakker, K. (forthcoming) *Evolving paradigms for transboundary water management along the Canada-US border*. UN ECE publication.

Peloso, M. and Morinville, C. (accepted). "Chasing for Water": Everyday practices and peri-urban water access in Ashaiman, Ghana. *Water Alternatives*.

Wilson, N., (forthcoming). The Politics of Adaptation: Subsistence Livelihoods and Vulnerability to Climate Change in the Koyukon Athabaskan Village of Ruby, AK. *Human Ecology*. DOI:10.1007/s10745-013-9619-3.

Yates, J. S. (forthcoming). Autochthonous development? The consecutive appropriation of kamayoq knowledge and practice in the Peruvian Andes. *Development and Change*.

Coming Soon

Books

Norman, E., Cook, C. and Cohen, A. (eds) (2014). *Negotiating Water Governance: Why the Politics of Scale Matter*. London: Ashgate.

This book brings together and connects the work of scholars to engage with such questions. The introduction of scalar debates into water governance discussions is a significant advancement of both governance studies and scalar theory: decision-making with respect to water is often, implicitly, a decision about scale and its related politics. When water managers or scholars explore municipal water service delivery systems, argue that integrated approaches to salmon stewardship are critical to their survival, query the damming of a river to provide power to another region and investigate access to potable water - they are deliberating the politics of scale. Accessible, engaging, and informative, the volume offers an overview and advancement of both scalar and governance studies while examining practical solutions to the challenges of water governance.

Book Chapters

Harris, L. and Islar, M. (in press) Neoliberalism, Nature, and Changing Modalities of Environmental Governance. In Atasoy, Y. (ed), *Contemporary Turkey Global Economic Crisis and the Politics of Diversity: Trans/Regional Variations, Mixed Responses, New Tensions* Y. Palgrave Macmillan.

Yates, J. S. (2013). Power and politics in the governance of community-based adaptation. In Ensor, J. and Huq, S. (Eds.), *Lessons from Community Based Adaptation*. Rugby: Practical Action Publishing (forthcoming).

Thank You to Our Funders

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