Elizabeth A. Tilley

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https://orcid.org/0000-0002-2095-9724

COUNTRY EXPERIENCE

Malawi (5 years), South Africa (2 years), Mexico (1 year), Nepal, Tanzania, Costa Rica, Egypt, Uganda, Kenya, Burkina Faso, Côte d'Ivoire, Honduras

EDUCATION

Swiss Federal Institute of Technology Zürich (ETH Zürich), PhD in Development Economics, October 2010-March 2015. *Supervised by Prof. Isabel Günther*

- Dissertation: "Acceptance, Impact and Feasibility of Incentives for Increasing Toilet Use: A Case Study in eThekwini."
- 2 waves of data collection, 6 rural communities, field experiment with 700 households

University of British Columbia, Vancouver, British Columbia, Canada, MASc, CivilEngineering, Pollution Control and Waste Management, September 2006. Supervised by Prof. Don Mavinic

- Thesis: "The effects of urine storage conditions on struvite recovery"
- CIHR/MSFHR Strategic Training Program "Bridging Public Health, Engineering & Policy Research"

University of Waterloo, Waterloo, Ontario, Canada, BASc, Environmental Engineering, Co-operative Program, Civil Specialization, Water Resources Option, June 2003.

PROFESSIONAL EXPERIENCE

Swiss Federal Institute of Technology Zürich (ETH Zurich), Department of Mechanical and Process Engineering, <u>Associate Professor</u> (February 1 2021-present)

• Cross-appointed to Department of Humanities, Social and Political Sciences

University of Malawi, The Polytechnic, Department of Environmental Health, <u>Senior Lecturer</u> (September 2015-September 2020)

- Developing and teaching courses related to WASH and Research Methods for graduate and undergraduate students
- Extensive local research engagement with national and international partners

University of KwaZulu-Natal, South Africa, School of Engineering (Civil Engineering), under the SARCHI Chair in Waste and Climate Change, Honorary Research Fellow (2019-present)

- Guest, and remote lecturing (Graduate Summer School November, 2019)
- Research and funding collaboration (continuous)

University of Victoria, Department of Civil Engineering, Adjunct Professor (2018-present)

- Guest, and remote lecturing (CIVE444: Water & Sanitation for Developing Countries)
- Supervision of graduate level research (A. Cassivi (PhD) with Prof. Dorea)

Eawag, Swiss Federal Institute of Aquatic Science & Technology, Department of Water and Sanitation in Developing Countries (Sandec), <u>Project Officer</u> (2007-2010), <u>Academic Guest</u> (2010-2015)

- Work package co-leader for EU-funded NETSSAF (Network for the development of Sustainable Approaches for large scale implementation of Sanitation in Africa)
- Research Coordinator for NCCR North-South Program at Eawag (including Central America, West Africa and Southeast Asia partners)

Eawag, Swiss Federal Institute of Aquatic Science & Technology, Department of Urban Water Management, <u>Intern</u> (October 2006-April 2007)

• Laboratory experiments and computer modelling related to nutrient recovery

- **UBC Centre for International Health,** CIDA Tier 1 University Partnerships in Cooperation and Development (UPCD project, Ecuador, <u>Project Assistant</u> (Jan.-March 2006)
 - Develop and organize all aspects of a two-week Water, Waste and Sanitation Module for 30 students participating the 'Masters of Public Health Program Applying an Ecosystem Approach' program, between 3 universities in Ecuador.
- Canadian International Development Agency, International Youth Internship Program,
 - Community Water and Sanitation, Guerrero, Mexico, Project Manager (July 2003-June 2004)
 - Training of local boys and men in construction and operation of Dry Toilet and Tank (water harvesting) units; improvement and monitoring of construction and project progress
- **Aquafor Beech Ltd.,** Brampton, Ontario, Canada, <u>Water Resource Engineering Assistant</u> (September-December 2001)
- City of Ottawa, Ottawa, Ontario, Canada, Water Resource Engineering Assistant (January-April 2001)
- United Parcel Service Canada (UPS), <u>Plant Engineering Assistant</u> (September 1999-January 2000)

PEER REVIEWED PUBLICATIONS/ CHAPTERS

- Kalina, M., Makwetu, N., & **Tilley, E.** (2023). ""The rich will always be able to dispose of their waste": a view from the frontlines of municipal failure in Makhanda, South Africa". *Environment, Development and Sustainability*, 1-24.
- Hershey, R., Kalina, M., Kafodya, I., & **Tilley, E.** (2023). "A sustainable alternative to traditional building materials: assessing stabilised soil blocks for performance and cost in Malawi". *International Journal of Sustainable Engineering*, *16*(1): 155-165...
- Mnthambala, F., **Tilley, E.**, Tyrrel, S., & Sakrabani, R. (2022). "Effect of Various Organic Fertilisers on Phosphorus Mineralisation, Use Efficiency and Maize Yield". *Resources*, 11(10), 86.
- Kalina, M., Ogwang, J. O., & Tilley, E. (2022). "From potential to practice: rethinking Africa's biogas revolution". *Humanities and Social Sciences Communications*, 9(1), 1-5.
- Panulo, M., Chidziwisano, K., Beatlle, T.K., **Tilley, E.**, Kambala, C., & Morse, T. (2022). "Process Evaluation of "The Hygienic Family" Intervention: A Community-Based Water, Sanitation, and Hygiene Project in Rural Malawi". *International Journal of Environmental Research and Public Health*. 19(11): 6771.
- Metson, G.S., Brownlie, W.J., Bausch, J.C., Jonell, M., Matsubae, K., Mnthambala F., Schill, C., & E. Tilley. (2022). Chapter 8. "Consumption the missing link towards phosphorus sustainability", in: Brownlie, W.J., Sutton, M.A., Heal, K.V., Reay, D.S., Spears, B.M. (eds.), Our Phosphorus Future. UK Centre for Ecology and Hydrology, Edinburgh, doi: 10.13140/RG.2.2.36498.73925.
- Kalina, M., Kwangulero, J., Ali, F., Abera, Y.G., & E. Tilley (2022) ""Where Does it Go?": Perceptions and Problems of Riverine and Marine Litter Amongst South Africa and Malawi's Urban Poor". *PLOS Water*: 1(3): e0000013.
- Kalina, M., Kwangulero, J., & E. Tilley (2022) "We are from there, that's our land": contestation, maize, and the problemisation of waste at Blantyre, Malawi's Mzedi dumpsite. *Local Environment*. 27(5): 539-553.
- Kalina, M., Kwangulero, J., Ali, F., & E. Tilley (2022) ""You Need to Dispose of them Somewhere Safe": Covid-19, Masks and the Pit Latrine in Malawi and South Africa". *PLOS ONE*. 17(2): e0262741.
- Yesaya, M., Mpanang'ombe W., & **Tilley, E.** (2021). "The Cost of Plastics in Compost". *Frontiers in Sustainability*, 2, http://doi.org/10.3389/frsus.2021.753413.
- Kalina, M. Ngcoya, M., Nkhoma, B., & **Tilley, E**. (2021). "Conceptualising Reuse in African Households: Perspectives from Chembe, Malawi". *Environment, Development and Sustainability*, 24(10): 12404-12426.

- Mwagomba, P., & **Tilley, E**. (2021). "Financial and operational sustainability of a gravity-fed rural piped water supply system in Malawi", *Journal of Water, Sanitation and Hygiene for Development*, 11(6): 948-958.
- **Tilley, E.**, & Kalina, M. (2021). ""My Flight Arrives at 5 am, Can You Pick Me Up?": The Gatekeeping Burden of the African Academic", *Journal of African Cultural Studies*, 33(4), 538-548.
- Roxburgh, H., Magombo, C., Kaliwo, T., **Tilley, E**., Hampshire, K., Oliver, D.M., & Quilliam, R.S. (2021). "Blood flows: mapping journeys of menstrual waste in Blantyre, Malawi". *Cities & Health*, *6*(4): 738-751.
- Mahdjoub, N., Kalina, M., Augustine, A., & **Tilley, E**. (2021). "Innovating traditional building materials in Chembe, Malawi: assessing post-consumer waste glass and burnt clay bricks for performance and circularity". *International Journal of Sustainable Engineering*, *14*(4), 874-883.
- Mpanang'ombe, W., Bray, B., & **Tilley, E**. (2021). "Pit emptying subsidy vouchers: a two-phased targeting and structuring experiment in Blantyre, Malawi". *International Journal of Urban Sustainable Development*, https://doi.org/10.1080/19463138.2021.1981910.
- Capone, D., Chigwechokha, P., de los Reyes III, F.L., Holm, R.H., Risk, B.B., **Tilley, E., &** Brown, J. (2021). "Impact of sampling depth on pathogen detection in pit latrines". *PLOS Neglected Tropical Diseases*, *15*(3), e0009176.
- Zimmer, C., Cassivi, A., Baía, C.C., **Tilley, E.**, Bain, R., Johnston, R., & Dorea, C. (2021). "Assessment of Decontamination and Reuse of Disposable Filter Funnels Used in Microbiological Water Quality Tests". *Environmental Health Insights*, *15* https://doi.org/10.1177/11786302211014400.
- Cassivi, A., **Tilley, E.**, Waygood, E. O. D., & Dorea, C. (2021). "Seasonal Preferences and Alternatives for Domestic Water Sources: A Prospective Cohort Study in Malawi". *ACS ES&T Water*, 1(6), 1464-1473.
- Mpanang'ombe, W., Mallory, A. & **Tilley, E.** (2021). "Poverty, politics and plastic: Organic waste sorting in Blantyre's public markets". *Journal of Urban Management, 10*(3), 192-204.
- Mnthambala, F., **Tilley, E.**, Tyrrel, J. & Sakrabani, R. (2021). "Phosphorus flow analysis for Malawi: Identifying potential sources of renewable phosphorus recovery". *Resources, Conservation and Recycling, 173*, 105744.
- Narayan, A.S., Marks, S.J., Meierhofer, R., Strande, L., **Tilley, E.**, Zurbrügg, C., & Lüthi, C. (2021). "Advancements in and Integration of Water, Sanitation, and Solid Waste for Low- and Middle-Income Countries". *Annual Review of Environment and Resources*, 46(1), 193-219.
- Kalina, M., Ali, F., & **Tilley, E**. (2021). "Everything Continued As Normal": What Happened To Africa's Wave Of Covid-19 Waste?". *Waste Management*, 120, 277-279.
- Cassivi, A., **Tilley, E.**, Waygood, E. O. D., & Dorea, C. (2021). "Household practices in accessing drinking water and post collection contamination: A seasonal cohort study in Malawi". *Water Research*, 189, 116607.
- Yesaya, M., & **Tilley, E**. (2021). "Sludge bomb: The impending sludge emptying and treatment crisis in Blantyre, Malawi". *Journal of Environmental Management*, 277, 111474.
- Cassivi, A. **Tilley, E.**, Waygood, EOD., & Dorea, C. (2021) "Evaluating self-reported measures and alternatives to monitor access to drinking water in Malawi: A case study in Malawi". *Science of The Total Environment*, 750, 141516
- **Tilley, E**. & Kalina, M. (2020). ""We Are Already Sick": Infectious Waste Management and Inequality in the Time of Covid-19, a Reflection from Blantyre, Malawi". *Worldwide Waste: Journal of Interdisciplinary Studies*, 3(1).
- Kalina, M., & **Tilley**, E. (2020). ""This is our next problem": cleaning up from the covid-19 response". *Waste Management*. https://doi.org/10.1016/j.wasman.2020.05.006
- Kalina, M. & **Tilley, E.** (2020). "Bad' Trash: Problematising waste in Blantyre, Malawi". *Detritus*. 1-14.
- Cassivi, A., **Tilley, E.**, Waygood, O., & Dorea, C. (2020). "Trends In Access To Water And Sanitation In Malawi: Progress And Inequalities (1992-2017)". *Journal of Water and Health*. https://doi.org/10.1101/2020.03.30.20047613.

- Chidziwisano, K., **Tilley, E.**, & Morse, T. (2020). "Self-Reported Versus Observed Measures: Validation of Child Caregiver Food Hygiene Practices in Rural Malawi". *International Journal Of Environmental Research And Public Health*, 17(12), 4498.
- Morse, T., **Tilley, E.**, Chidziwisano, K., Malolo, R., & Musaya, J. (2020). "Health outcomes of an integrated behaviour centred water, sanitation, hygiene and food safety intervention a randomised before and after trial". *International Journal of Environmental Research and Public Health*, 17(8), 2648.
- Purshouse, H., Hampshire, K, **Tilley, E.**, Oliver, D, & Quilliam, R. (2020). "Being shown samples of composted human excreta strongly influences acceptability of its use in peri-urban subsistence agriculture". *Resources, Conservation & Recycling*: X, 100041.
- Purshouse, H., Hampshire, K., Kaliwo, T., **Tilley, E.**, Oliver, D., & Richard S Quilliam (2020). "Power, danger, and secrecy a socio-cultural examination of menstrual waste management in urban Malawi". *PLOS ONE* 15 (6), e0235339.
- Mtika, W. & **Tilley, E**. (2020). "Environmental Sanitation Planning: Feasibility of the CLUES Framework in a Malawian Small Town". *Frontiers in Environmental Science: Water and Wastewater Management*. https://doi.org/10.3389/fenvs.2019.00204.
- Cassivi, A., Guilherme, S., Bain, R., Tilley, E., Waygood, E. O. D., & Dorea, C. (2019). "Drinking water accessibility and quantity in low and middle-income countries: A systematic review". *International Journal of Hygiene and Environmental Health*, 222(7), 1011-1020.
- Chidziwisano, K., **Tilley, E.**, Malolo, R., Kumwenda, S., Musaya, J., & Morse, T. (2019). "Risk Factors Associated with Feeding Children under 2 Years in Rural Malawi—A Formative Study". *International Journal of Environmental Research and Public Health*, *16*(12), 2146.
- Morse, T., Chidziwisano, K., **Tilley, E.,** Malolo, R., Kumwenda, S., Musaya, J., & Cairncross, S. (2019). "Developing a contextually appropriate integrated hygiene intervention to achieve sustained reductions in diarrheal diseases". *Sustainability*, *11*(17), 4656.
- Manjaya, D., **Tilley**, E., & Marks, S. (2019). "Informally Vended Sachet Water: Handling Practices and Microbial Water Quality". *Water: Water, Sanitation, and Hygiene in Humanitarian Contexts*, 11(4), 800.
- Farling, S., Rogers, T., Knee, J. S., **Tilley, E**., Brown, J., & Deshusses, M. A. (2019). "Bioaerosol emissions associated with pit latrine emptying operations". *Science of The Total Environment*, 648, 1082-1086.
- Ndau, H., & **Tilley, E**. (2018). "Willingness to Pay for Improved Household Solid Waste Collection in Blantyre, Malawi". *Economies*, 6(4), 54.
- Mpanang'ombe, W., **Tilley, E.**, Zabaleta, I., & Zurbrügg, C. (2018). "A Biowaste Treatment Technology Assessment in Malawi". *Recycling*, *3*(4), 55.
- Kasinja, C. & **Tilley, E.** (2018). "Formalization of Informal Waste Pickers' Cooperatives in Blantyre, Malawi: A Feasibility Assessment". *Sustainability*, 10(4): doi:10.3390/su10041149
- Cordell, D., Metson, G.S., Iwaniec, D.M., Bui, T.T., Childers, D.L., Dao, N., Dang, H.T., Davidson, J., Jacobs, B., Kumwenda, S. and Morse, T., Nhuyen, V.A., Thole, B., **Tilley, E**. (2018). "Transforming Cities: Securing food and clean waterways through phosphorus governance", In *Transdiciplinary Research and Practice for Sustainability Outcomes*, ed. D. Fam, J. Palmer, C. Reidy, C. Mitchell, Routledge.
- **Tilley, E.,** Logar, I., & Günther, I. (2017). "The effect of giving respondents time to think in a choice experiment: a conditional cash transfer programme in South Africa". *Environment and Development Economics*, 22(2): 202-227.
- **Tilley, E.** (2016). Cost-effectiveness and community impacts of two urine-collection programs in rural South Africa, Environmental Science: *Water Research & Technology*, DOI: 10.1039/C5EW00237K
- **Tilley, E.**, & Günther, I. (2016). The Impact of Conditional Cash Transfer on Toilet Use in eThekwini, South Africa: *Sustainability*, 10: 1070.
- **Tilley, E.,** Strande, L., Lüthi, C., Mosler, H. J., Udert, K. M., Gebauer, H., & Hering, J. G. (2014). "Looking beyond Technology: An Integrated Approach to Water, Sanitation and Hygiene in Low Income Countries", *Environmental Science & Technology*, DOi: 10.1021/es501645d.

- **Tilley, E.** (2014). "Chapter 13: Financial Transfers and Responsibility in Faecal Sludge Management Chains", In *Faecal Sludge Management: Systems Approach for Implementation and Operation*, ed. L. Strande, M. Ronteltap, D. Brdjanovic, IWA Publishing. 432 p.
- I.M. Kengne & **Tilley, E.** (2014). "Chapter 8: Planted Dry Beds", In *Faecal Sludge Management: Systems Approach for Implementation and Operation*, ed. L. Strande, M. Ronteltap, D. Brdjanovic, IWA Publishing. 432 p.
- Okem, A. E., Xulu, S., **Tilley, E.**, Buckley C., & Roma. E. (2013). "Assessing perceptions and willingness to use urine in agriculture: a case study from rural areas of eThekwini municipality, South Africa", *Journal of Water, Sanitation and Hygiene for Development,* 3(4): 582–591.
- **Tilley, E.**, Bieri, S., & Kohler, P. (2013). "Sanitation in Developing Countries: A Review Through a Gender Lens", *Journal of Water, Sanitation and Hygiene for Development*, 3(4): 298–314.
- **Tilley, E.** (2013). "Conceptualizing sanitation systems to account for new complexities in processing and management", In *Source-Separation and Decentralization for Wastewater Management*, ed. T.A. Larsen, K.M. Udert, J. Lienert, IWA Publishing. 520 p.
- Maurer, M., Bufardi, A., **Tilley, E**., Zurbrugg, C., & Truffer, B. (2012). "A compatibility-based procedure designed to generate potential sanitation system alternatives". *Journal of Environmental Management*, 104: 51-61.
- Sakthivel, SR., **Tilley, E.,** & Udert, KM. (2012). "Wood ash as a magnesium source for phosphorus recovery from source-separated urine". *Environmental Science and Technology*, 419: 68-75
- Johnston, R.B., Berg, M., Johnson, C.A., **Tilley, E.**, & Hering J.G. (2011) "Water and Sanitation in Developing Countries: Geochemical Aspects of Quality and Treatment", *Elements*, 7(3): 163-168
- Decrey, L., Udert, K.M., **Tilley, E.**, Pecson, B.M., & Kohn, T. (2011). "Fate of the pathogen indicators phage FX174 and Ascaris suum eggs during the production of struvite fertilizer from source-separated urine". *Water Research*, 45(16): 4960-4972.
- Etter, B., Tilley, E., Khadka, R. & K.M. Udert. (2010). Low-cost struvite production using source-separated urine in Nepal. *Water Research*, 45(2): 852-862
- **Tilley E**, Zurbrügg C, & Lüthi C. (2010). "A Flowstream Approach for Sustainable Sanitation Systems", in *Social Perspectives on the Sanitation Challenge*, ed. B, Vliet, G. Spaargaren, P. Oosterveer P, Dordrecht, Netherlands: Springer, pp 69-86.
- Gerritsen PRW, Chamizo H, Guerrero de León A, Masson S, & **Tilley E**. (2010). Governance, environmental problems and local responses in Mexico, Central America and the Caribbean. *In: Hurni H, Wiesmann U, editors; with an international group of co-editors. Global Change and Sustainable Development: A Synthesis of Regional Experiences from Research Partnerships. Perspectives of the Swiss National Centre of Competence in Research (NCCR) North-South*, University of Bern, Vol. 5. Bern, Switzerland: Geographica Bernensia, pp 435–448.
- Zurbrügg, C. & **Tilley, E**. (2009). "A system perspective in sanitation Human waste from cradle to grave and reincarnation". *Desalination*, 248: 410-417.
- **Tilley, E.**, Gantenbein, B., Khadka, R., Zurbrugg, C. & Udert, K.M. (2009). "Social and economic feasibility of struvite recovery from Urine at the community level in Nepal". *In: Ashley,K., Mavinic, D., Koch, F. (eds). International Conference on Nutrient Recovery from Wastewater Streams*. London: IWA Publishing, pp 169-178.
- **Tilley, E.**, Lüthi, C., Morel, A., Zurbrügg, C., & Schertenleib, R. (2008). *Compendium of Sanitation Systems and Technologies*. Swiss Federal Institute of Aquatic Science and Technology (Eawag). Dübendorf, Switzerland, 158 pp.
- **Tilley, E.**, Atwater, J. & Mavinic, D. (2008) "Effects of storage on phosphorus recovery from urine", *Environmental Technology*, 29: 807-816.
- **Tilley, E.,** Atwater, J. & Mavinic, D. (2008) "Recovery of struvite from stored human urine", *Environmental Technology*, 29: 797-806.
- Lüthi, C., Schertenleib, R. & Tilley, E. (2007). "The Household-Centred Environmental Sanitation approach. *Waterlines*, 26: 2-4.

REPORTS AND PROCEEDINGS

- Slekiene, J., **Tilley, E**., & Chidziwisano, K. (2022). Psychosocial factors associated with intention to pursue tertiary education among Malawian students: The moderating effect of mental health. In *17th Conference of the Swiss Health Psychology (SGGPsy 2022)*. The University of Zurich, Switzerland.
- Collet, S., Yesaya, M., & Tilley, E. (2018). *SFD Report Blantyre, Malawi*. The SFD Promotion Initiative. Sustainable Sanitation Alliance.
- **Tilley, E.**, Ulrich, L., Lüthi, C., Reymond, P., & Zurbrügg, C. (2014). *Compendium of Sanitation Systems and Technologies*. Swiss Federal Institute of Aquatic Science and Technology (Eawag). Dübendorf, Switzerland.
- **Tilley, E.,** & Günther, I. (2014). Mobile phones for collecting WASH data in Low-income countries. *In: Proceedings of the 37th WEDC International Conference- Sustainable Water and Sanitation Services for All in a Fast Changing World*. 15–19 September 2014, Hanoi, Vietnam
- **Horst, A.,** Günther, I. & **Tilley, E.** (2014). Increasing private sanitation investments: The Urban Affordable Clean Toilets (U-ACT) project. *In: Proceedings of the 37th WEDC International Conference- Sustainable Water and Sanitation Services for All in a Fast Changing World.* 15–19 September 2014, Hanoi, Vietnam
- Lüthi, C., Morel, A., **Tilley, E.**, & Ulrich, L. (2011). *Community-Led Urban Environmental Sanitation Planning (CLUES)*. Swiss Federal Institute of Aquatic Science and Technology (Eawag), Dübendorf, Switzerland, 102 pp.
- Lüthi, C. & **Tilley, E**. (2010). "Sanitation-Demand and Gender". *Sandec News 11*, Eawag, Switzerland: 16-17.
- **Tilley, E.,** Etter, B., Khadka, R., Manandhar Sherpa, A., Shrestha, R.R. & Udert, K.M. (2009). "Development of Struvite Reactors for Phosphate Recovery from Urine in the Kathmandu Valley". *In: Proceedings: 1st IWA Development Congress*, 15-19 November, Mexico City, Mexico.
- **Tilley, E.,** Lüthi, C., Morel, A., Zurbrügg, C., & Schertenleib, R. (2009). *Compendium des Systèmes et Technologies d'Assainissement*. Swiss Federal Institute of Aquatic Science and Technology (Eawag). Dübendorf, Switzerland
- Zurbrügg, C., Bufardi, A., **Tilley, E.**, Maurer, M., & Truffer, B. 2009. "Decision-Making for Sanitation Systems: A support tool (WISDOM) for selecting the best available options to secure sustainable sanitation systems". *Sandec News 10*, Eawag, Switzerland: 20-2.
- Lüthi C, Morel A, Kohler P, & **Tilley E**. (2009). *People's Choice First. A 4-Country Comparative Validation of the HCES Planning Approach for Environmental Sanitation*. NCCR North-South Dialogue 22. Bern, Switzerland: NCCR North-South.
- **Tilley, E.** (2009). "Sanitation Planning for the urban poor". *In: A World of Opportunities-working in the international water sector*. IWA Publishing, London.
- **Tilley, E.**, Etter, B., Gantenbein, B., Khadka, R., & Udert, K.M. (2009). "STUN: STruvite recovery from Urine in Nepal". *Sandec News*, Eawag-Sandec, Dübendorf, Switzerland.
- Lüthi, C., Morel, A., & **Tilley, E**. (2008). "Integrate at the Top, Involve at the Bottom The Household-Centred Approach to Environmental Sanitation". *In: Proceedings of the IRC Symposium on Sanitation for the Urban Poor, Partnerships and Governance*, Delft, The Netherlands: International Water and Sanitation Centre (IRC).
- Lüthi, C. & Tilley, E. (2008). "HCES: A new approach for environmental sanitation planning for urban areas". *In: Proceedings of the 33rd WEDC International Conference, Access to Sanitation and Safe Water: Global Partnerships and Local Actions*, Accra, Ghana.
- **Tilley, E.**, Zurbrügg, C. & Lüthi, C. (2008). "A flowstream approach for sustainable sanitation systems". *In: Proceedings of the International IWA Conference, Sanitation Challenges:New Sanitation Concepts and Models of Governance*, Wageningen, The Netherlands.
- Zurbrügg C. & **Tilley**, E. (2008). "A system perspective in sanitation human waste from cradle to grave and reincarnation". *In: Proceedings of International Workshop: Water and Sanitation in International Development and Disaster Relief*, Edinburgh, Scotland.

- Zurbrügg, C. & **Tilley, E**. (2008). "The Choice of Sanitation Systems and Technologies". *In: NETSSAF International Conference: Pathways towards Sustainable Sanitation in Africa*, Ouagadougou, Burkina Faso.
- **Tilley, E.** (2008). "Compendium of Sanitation Systems and Technologies Not Just Another Sanitation Book". *Sandec News*, Eawag-Sandec, Dübendorf, Switzerland.
- **Tilley, E**. (2006). "Recovery of Struvite from Source-Separated Urine" MASc. Thesis, Dept. Civil Engineering, University of British Columbia, Vancouver, British Columbia.

CONFERENCES AND PRESENTATIONS

- **2022: Keynote speaker**: "Higher Education as the key to SDG success", Water Summit for Global Development: Catching up with Urbanisation, *TU Delft*, 15 March, 2022.
- **2022: Guest speaker**: Fix the Leaky Pipeline mentoring seminar (online), ETH Zurich, November 11, 2022.
- **2022: Guest speaker:** "Teaching with real-world examples attaching meaning to what students learn", Refresh Teaching event (online), *ETH Zurich*, October 27, 2022.
- **2022: Keynote speaker:** "Academia from the inside: things I wish I had known", 1st Water-WISER Early Career Researcher Conference, *Loughborough*, *UK*, June 22, 2022.
- **2022: Guest speaker:** "Don't follow me, I'm lost too", AV-MAVT Connects, *ETH Zurich*, June 2, 2022
- **2022: Guest speaker**, Round-table on Decolonizing Ecology and the Environmental Sciences, Student Sustainability Commission, ETH Zurich, May 25, 2022.
- **2022: Guest speak:** LIMES (Women in electrical and Mechanical Engineering at ETH Zurich) Talks, *ETH Zurich*, 27 April, 2022
- **2019:** Invited presenter: Post-graduate summer school on "Innovations in Waste to Resource Management and Climate Change Mitigation". Presentation: Primum non nocere except on burning day: Politics, culture and impact of medical waste incineration in Malawi, *Durban, South Africa*, November 25-27, 2019.
- 2019: Poster Presentation (Co-author with A. Cassivi): Validity and reliability of self-reported measures used to monitor access to drinking water A case study in southern Malawi, UNC Water and Health: Where Science Meets Policy, *Chapel Hill, North Carolina*, October 7-11, 2019.
- **2019:** Presentation (Co-author with M. Kalina): Blurred Lines: Agricultural Production On The Margins Of A Dumpsite In Blantyre, Malawi, Seventeenth International Waste Management and Landfill Symposium, *Cagliari*, *Italy*, 30 September-4 October, 2019.
- **2019:** Panelist: Introduction to the overarching theme of sanitation systems thinking, WASH systems symposium: All Systems Go! *The Hague, The Netherlands*, 12-14 March, 2019.
- **2019:** Panelist: Enabling environment for urban utilities, WASH systems symposium: All Systems Go! *The Hague, The Netherlands*, 12-14 March, 2019.
- **2019:** Panelist: Emerging Conclusions for Sanitation Systems Thinking, WASH systems symposium: All Systems Go! *The Hague, The Netherlands*, 12-14 March, 2019.
- **2019:** Presentation: Sludge Bomb: Managing the Growing Backlog of Unemptied FS in Blantyre, Malawi, 5th International Faecal Sludge Management Conference (FSM5), *Cape Town, South Africa*, 18-22 February, 2019.
- **2019:** Presentation (Co-author with J. Freihardt): Citizen Science for Faecal Sludge Characterization in Blantyre, Malawi, 5th International Faecal Sludge Management Conference (FSM5), *Cape Town, South Africa*, 18-22 February, 2019.
- **2018:** Presentation: Academic Support to the Global South: a menu of high-impact options, Reaching Across Borders, Building a Better World Conference. *Montreal, Canada*, 6-7 Novemer, 2018.
- 2018: Presentation (Co-author): Microbiological Quality And Handling Practices Of Street-Vended Sachet Drinking Water In Mwanza, Malawi, 41st WEDC International Conference, Egerton University, Nakuru, Kenya, 9-13 July, 2018.
- **2017**: Presentation: The Informal Economy of Pit Emptying in Blantyre, International Faecal Sludge Management Conference (FSM4). *Chennai, India*, 20-22 February 2017.

- **2015:** Keynote speaker: Opening of Model United Nations. *Inter-Community School (ICS), Zumikon, Switzerland*, 21 April, 2015.
- **2015:** Guest lecturer: Products and Functional Groups for Building Sanitation Systems, Class: GEX-4000/7000 Eau et assainissement pour pays en développement (Prof. Caetano Dorea). Département de génie civil et de génie des eaux/ Civil and Water Engineering, Université Laval, Canada, 1 April, 2015.
- **2014:** Presentation: Mobile phones for collecting WASH data in Low-income countries, 37th WEDC International Conference- Sustainable Water and Sanitation Services for All in a Fast Changing World. *Hanoi, Vietnam,* 15–19 September 2014
- **2014:** Presentation: Increasing private sanitation investments: The Urban Affordable Clean Toilets (U-ACT) project, 37th WEDC International Conference- Sustainable Water and Sanitation Services for All in a Fast Changing World. *Hanoi, Vietnam,* 15–19 September 2014
- **2012:** Presentation: Incentivising sanitation through urine collection, International Faecal Sludge Management Conference (FSM2). *Durban, South Africa*, 29-31 October 2012.
- **2012:** Keynote speaker: What Contribution Can Sanitation Make to the Global P challenge?, 3rd Sustainable Phosphorus Summit. *Sydney, Australia*, 29th February-3rd March, 2012.
- **2011**: Presentation: Sanitation as a source of sustainable nutrient recycling in developing countries, Phosphorus: Pollution, resource scarcity and its implications for food security, North-South Forum. *Zurich, Switzerland*, 12 April 2011.
- **2010:** Invited presenter: Household Centred Environmental Sanitation, Annual Conference of the KFPE. *Bern, Switzerland*, 7 October, 2010.
- **2009**: Movie Presentation: Struvite from Urine in Nepal (STUN), Social and Economic Feasibility of Struvite Recovery from Urine at the Community Level, Eawag Action Research Symposium. *Duebendorf, Switzerland*, 15 September, 2009.
- **2009**: Presentation: Development of Struvite Reactors for Phosphate Recovery from Urine in the Kathmandu Valley, 1st IWA Development Congress. *Mexico City, Mexico*, 15-19 November.
- **2009**: Presentation: Social and economic feasibility of struvite recovery from urine at the community level in Nepal, International Conference on Nutrient Recovery from Wastewater Streams. *Vancouver, Canada*, 10-13 May 2009.
- **2009**: Presentation: Sandec's on-going research in East Africa, Faculty of Engineering. *Makerere University, Uganda*. 21 April, 2009.
- **2009**: Presentation: Compendium of Sanitation Systems and Technologies, World Water Forum. *Istanbul, Turkey*, 16-22 March 2009.
- **2009**: Poster: Struvite recovery in Kathmandu: a business model for increased food security, Alliance for Global Sustainability, Annual Meeting. *Zurich, Switzerland*, 26-29 January 2009.
- **2008**: Presentation: Compendium of Sanitation Systems and Technologies, WASH Coalition Nepal. *Kathmandu*, *Nepal*. November 10, 2008
- **2008**: Convenour of special seminar: Compendium of sanitation systems and technologies, World Toilet Summit. *Macau*, 4-6 November 2008.
- **2008:** Panelist: Capacity Building of human resources to fufill the MDGs in Sustainable Sanitation in Africa, Pathways towards sustainable sanitation in Africa: Netssaf Conference. *Ouagadougou, Burkina Faso*, 24-27 September, 2008.
- **2008**: Presentation: Planning for sanitation. Stockholm World Water Week. *Stockholm, Sweden*, 19 August, 2008.
- **2008**: Presentation: A Flowstream Approach for Sustainable Sanitation, The Sanitation Challenge. *Wageningen, Netherlands*, 19-21 May 2008.
- **2008**: Presentation: Sanitation Systems and Technologies, WSSCC-WHO Annual Meeting. *Geneva, Switzerland*, 6 May, 2008.
- **2008**: Presentation: Household Centred Environmental Sanitation: Costa Rica, NCCR North South Site Visit. *Tegucigalpa, Honduras*, 23 April 2008.
- **2007**: Participant: International scientific conference on Health and Environmental Research Challenges in Urban Poor Settlements, NCCR North-South, Joint Areas of Case Study West Africa. Abidjan, *Côte d'Ivoire*. 3-5 September, 2007.

2007: Participant: Aguasan Workshop: Opportunities and Challenges for the Water and Sanitation Sector in a Decentralized Context. *Gwatt, Switzerland*, 18 - 22 June 2007.

FUNDING

- **2023** 149,990 CHF, **ORD PROGRAM EXPLORE CALL 2022** "Open WASH data by building Open Science Competencies and Community" for 18 months, PI
- 2023 29,905 CHF, ORD MEASURE 1 3rd CONTRIBUTE CALL 2022 "Open JMP unlocking the potential of global indicator data" for 12 months, PI
- **2022** 175,000 CHF, **E4D Doctoral Scholarship Programme** "How biogas failed to light up a continent: why the most promising technology never spread across Africa" for 36 months, PI
- **2022** 20,000 CHF, **ETH4D Seed Grant** "AKYAS Liquids-Diverting Toilet interface" for 12 months, PI
- **2022** 56,500 CHF, **ETH4D Challenge Grant** "DungBeetle Humanitarian Sanitation Solution" for 12 months, PI
- 2022 10,000 CHF, ETH4D Faculty Exchange Grant/Visiting Scientist: "Prof. Gudina Terefe Tucho, Jimma University, Ethiopia" for 2 months, PI
- **2021** 14,910 CHF, Leading House Africa "Psychosocial and context factors associated with the application to tertiary education in Malawi" for 10 months, PI
- **2019** £439,765, **The Royal Society (UK)** "Enabling the circular economy for sanitation" for 30 months; co-PI
- 2018 \$10,000AUD, The Australia-Africa Universities Network Partnership Research & Development Fund "Enabling a food-phosphorus-sanitation sustainability network" to facilitate the development of an African phosphorus network
- 2017 £65,614 The Sue White Fund for Africa "Potential of Recovery and Utilisation of Phosphorus from Sewage Sludge to Meet Crop P Demand in Malawi" to support the PhD of Frank Mnthambala for 3 years at Cranfield University (Co-Supervisor)
- **2015** 466,000 CHF, **Eawag** "*Professorship Abroad*" for 5 years of fully funded salary and research at the University Malawi
- **2010** \$3 million USD, **The Bill and Melinda Gates Foundation** "*Promoting sanitation and nutrient recovery through urine separation*" (the eventual funding source of my PhD research, though I was a Sandec employee at the time of writing); co-author.
- **2009** CHF 100,000, **Symphasis Foundation**, "*Struvite from Urine in Nepal: STUN*" for 18 month research project in Nepal; co-author.
- **2007** 50,600 CHF, **Eawag Discretionary Funding**, "Struvite from Urine in Nepal: STUN" for 1-year of "seed" research; co-author.
- 2009 10,000 CHF, Bourses pour jeunes chercheurs: La Fondation du Centre Suisse de Recherches Scientifiques (CSRS), à Abidjan, Côte d'Ivoire (for Masters research by S. Brechbühl); co-author.

TEACHING AND LECTURES

ETH Courses

- Colloquium Science, Technology, and Policy, FS2023
- ETH4D PhD Seminar: Research for Global Development, FS2023
- International Engineering: from Hubris to Hope, FS2023, FS2022, FS2021
- International Development Engineering, SS2023, SS2022, SS2021
- Product Development and Engineering Design, SS2023, SS2022
- Research Design for Global Sustainable Development, SS2023
- Transdisciplinary Case Study, SS2023
- ETH4D PhD Seminar: Research for Development, FS2022, FS2021
- Water, Sanitation and Waste Management, FS2022
- ETH Sustainability Summer School, SS2022, SS2021
- Research Beyond the Lab: Open Science and Research Methods for a Global Engineer, SS2022

Other Courses and lectures

- Guest speaker Sustainable Development Goals in Context at ETH Zurich: *Health, Well-Being, and Demography*, May 4, 2023 (online)
- Guest speaker FNH 455 Applied International Nutrition at University of British Columbia, Canada: The WASH Benefits and SHINE Trials: Interpretation of WASH Intervention Effects on Linear Growth and Diarrhoea; Looking Beyond Technology: An Integrated Approach to Water, Sanitation and Hygiene in Low Income Countries, February 15, 2022. (online)
- **Research Methods** (406&407) (Thesis Project): FW&SS 2016/7, FW&SS 2017/18, FW&SS 2018/19. The Malawi Polytechnic. Two-semester project course covering Research Methods, Data Collection, Analysis and Presentation (undergraduate thesis).
- **Solid Waste Management** (SWM 414): FW semester 2015/6, 2016/7, 2017/8, 2018/9. The Malawi Polytechnic. Topics include: Waste reduction, Recycling, Collection & Transport, Anaerobic Digestion, Composting, Sanitary Landfill, Black Soldier Flies
- Water Treatment (WAT 417): FW semester 2015/6, 2016/7, 2017/8, 2018/9. The Malawi Polytechnic. Topics include: Monitoring of Global Health, Microbial, Physical, Chemical contamination, Coagulation Flocculation, Filtration, Disinfection, Household Water Treatment and Storage
- **Environmental Waste Management and Treatment Technology** (APS-WMT-511): Masters Module, FW 2015/6, FW 2016/7. The Malawi Polytechnic.
- Certificate for Open Studies (COS): Sanitation, Water and Solid Waste for Development. Six-month blended learning program for 60+ WASH practitioners including MOOC-based, in-class, and capstone learning. The Malawi Polytechnic
- Invited Lecturer: **CIVE444- Water & Sanitation for Developing Countries**. University of Victoria, Prof. C. Dorea. March, 2018 (online)
- Lecturer of 6 modules: **Planning & Design of Sanitation Systems and Technologies**. Five- week MOOC in collaboration with EPF Lausanne (start date: September, 2014, ongoing). Available: https://class.coursera.org/sanitation-001
- Lecturer and Organizer: **Training of Trainers in the Compendium of Sanitation Systems and Technologies**. Universidad Nacional Agraria La Molina, *Lima*, *Peru*, 29 June-2 July, 2011.
- Lecturer and Organizer: **Training of Trainers in the Compendium of Sanitation Systems and Technologies**. Red de Agua y Saneamiento de Nicaragua (RASNIC), *Managua, Nicaragua*, 4-7 July, 2011.
- Seasonal lecturer: **Sanitary engineering in developing countries**. Masters course, EPF *Lausanne*, *Switzerland*. Fall Semester, 2009, 2010.
- Seasonal lecturer: **Environmental Sanitation in Developing Countries**. Masters course, *ETH Zurich*. Spring Semester, 2008, 2009, 2010.
- Invited Lecturer: **Water and Sanitation Engineering: From Emergency towards Development**. Water and Sanitation in Developing Countries Université de Neuchâtel and ICRC, *Neuchâtel, Switzerland*, 2 May, 2010.
- Invited Lecturer: **Sustainable Water and Sanitation Concepts.** Spring Semester Block Course: Sustainability and Water Resources, ETH Institute of Environmental Engineering, *Zurich*, *Switzerland*, 10 June, 2010.
- Invited Lecturer: **Water and Sanitation in Developing Countries.** International Labour Organization (ILO) Training Centre, *Turin, Italy*, 18-19 November, 2008.
- Invited Lecturer: **Sanitation Systems and Technologies in Developing Countries**. Engineers Without Boarders, *Padova, Italy,* 28-29 May 2009.
- Lecturer and Organizer: **Household Centred Concepts and Technologies for Water and Environmental Sanitation in Developing Countries**. Eawag PEAK Course (practice-oriented Eawag courses), Duebendorf, Switzerland, 15-16 May, 2008.
- Lecturer: **Future of sanitation**. Institute for Rural Development Planning, Dodoma, Tanzania, 25 October, 2007.

RESEARCH SUPERVISION

Doctoral students

- **2021** Alexandra Cassivi: "Understanding The Impact Of Water Accessibility In Rural Settings: A Case Study In Malawi". *University of Victoria (Canada)* (Co-Supervisor with Caetano Dorea).
- Frank Mnthambala: "Potential of Recovery and Utilisation of Phosphorus from Sewage Sludge to Meet Crop P Demand in Malawi". *Cranfield University (UK)* (Co-Supervisor with Ruben Sakrabani).
- **2021** Heather Purshouse: "Acceptability Of Excreta-Derived Fertiliser In Peri-Urban Agriculture". *Stirling University (UK)* (Co-Supervisor with Richard Quilliam)

Masters students

- 2023 Anna Lea Bossard: "Thermal Analysis and Optimization Potential of Clamp Kilns for Fired Clay Brick Production". *ETH Zurich*. **MSc Mechanical Engineering**.
- 2023 Raûl Alexander Bergen: "Evaluating the potential Extended Producer Responsibility returns for plastic-packaging riverine waste in Durban, South Africa". *ETH Zurich*. **MSc** Mechanical Engineering.
- Thomas Hardeman: "Effect of fruit and vegetable waste on anaerobic digestion using faecal sludge as primary feedstock". *ETH Zurich*. **MSc Environmental Engineering**.
- **2022** Lena Xue: "Suitability of the Modified Bardenpho process for faecal sludge treatment in Kumasi, Ghana". *ETH Zurich*. **MSc Environmental Engineering**.
- 2019 Jan Freihardt: "Citizen Science for Faecal Sludge Characterization in Blantyre, Malawi". ETH Zurich (Co-Supervisor with Eberhard Morgenroth). MSc Environmental Engineering.
- **2021** Oswald Nyirenda: "Comparison of different borehole management models: A Case of Chikwawa District". *The Malawi Polytechnic* **MSc Environmental Health.**
- 2021 Edward Ngwemba: "Factors that influence Community-Led Total Sanitation approach in achieving open defecation free status". *The Malawi Polytechnic* MPH (College of Medicine).
- 2020 Mike Andrew Kaulesi: "Solid Waste Assessment and Management Strategy: A Case study of Ndirande Township Zambia slums". *The Malawi Polytechnic*. **MSc Environmental Protection and Management.**
- 2020 Bedah Mnjeza: "Technical And Financial Feasibility Of Onsite Organic Waste Usage: A Case of Tea Estates In Mulanje District". *The Malawi Polytechnic* MSc Environmental Protection and Management.
- 2020 Patrick Mwagomba: "Assessing the Financial Sustainability and Social Acceptability of Chikwina Mpamba Gravity Fed Rural Piped Water Supply System in Nkhata Bay District-Northern Region of Malawi". The Malawi Polytechnic MSc Environmental Health.
- 2020 Ed Nhlane: "Safely managed drinking water at Dzaleka Refugee Camp in Malawi". *The Malawi Polytechnic* MSc Environmental Protection and Management.
- 2019 Cidrick Kasinja: "Waste Pickers Cooperatives As An Intervention To Improve Sanitation In Unplanned Urban Settlements". The Malawi Polytechnic MSc Water Resource Management
- **2019** Mnyaiza Manondo: "Evaluating The Informal Recycling Economy of Lilongwe". *The Malawi Polytechnic* **MSc Environmental Health**.
- 2019 Thomas Mchipha: "Quantification of Generated Health Care wastes and development of a predictive tool for waste management: A case of ten health centres in Balaka District". *The Malawi Polytechnic* MSc Environmental Health.
- **2019** Mtisunge Mganga: "Community managed water projects: Assessing household and operational factors". *The Malawi Polytechnic* **MPH (College of Medicine).**
- 2019 Josephine Muzira Ngaivale: "Factors Affecting Improved Cookstove (Chitetezo Mbaula) Adoption in Kansiya, Mangochi". *The Malawi Polytechnic* MSc Environmental Protection and Management.

- 2019 Hanke Ndau: "Dichotomous Choice Contingent Valuation for improved household solid waste management system in Blantyre". *The Malawi Polytechnic* MSc Water Resource Management.
- **2018** David Manjaya: "Microbiological Quality and Handling Practices of Locally-Vended Sachet Drinking Water in Mwanza". *The Malawi Polytechnic* **MPH.**
- 2018 James Mtonga: "Assessing intermediate hygiene and sanitation outcomes of a Community-Led Total Sanitation (CLTS) project in TA/Malenga, Ntchisi District- A comparative study of triggered and non-triggered villages". The Malawi Polytechnic MSc Environmental Health.
- **2018** Samden Seunda: "Factors affecting briquetting in Malawi". *The Malawi Polytechnic* **MSc Environmental Health**.
- 2017 Edna Mlanjira: "Characterization and quantification of household solid waste: Health Implications for the Peri-urban area of Mtandire in Lilongwe". *The Malawi Polytechnic* MPH.

PROFESSIONAL AND SERVICE ACTIVITIES

Tenure Review

2023, **Dr Jacqueline Thomas:** School of Civil Engineering, The University of Sydney (Australia) 2022, **Prof. Gudina Terefe Tucho**: Jimma University (Ethiopia)

External Doctoral Reviewer

2022, Daniel Dbida: "Implementing resource recovery from urban organic waste in low- and middle-income countries", *KTH Royal Institute of Technology*

Service

2023-present: Scientific Advisory Board for Swisscontact (NGO), Switzerland

2023-present: ETH Domain Expert Group for Research Practices related to Open Research Data

2022-present: **Steering Committee** for ETH4D, ETH

2021-present: **Executive Board Member** for the Institute of Science, Technology and Policy (ISTP), ETH

2022-present: Executive Board Member for the ETH Women Professors Forum

2021-present: **Advisory Board Member** for the "EPSRC Centre for Doctoral Training in Water and Waste Infrastructure Systems Engineered for Resilience (Water-WISER)", University of Leeds, Loughborough and Cranfield (UK) which aims to train 120 leading WASH specialists over the next 4 years

2019-present: Advisory Board Chair for WASTE Advisors Malawi (NGO), Blantyre, Malawi

Academic Review

Manuscript reviews are compiled here:

www.webofscience.com/wos/author/record/AFF-7660-2022

2021-present: **Editor** for Water SA, https://watersa.net

2019-present: Editor for Journal of Water, Sanitation and Hygiene for Development

(WASHDEV), https://www.editorialmanager.com/washdev/default2.aspx

2016-2021: Editor for Malawi Medical Journal, https://www.mmj.mw

2020-2023: **Associate Editor**, Waste Management,

https://www.editorialmanager.com/wm/default2.aspx

2023: **Reviewer** for European Research Council Starting Grant, €2.5 million

SELECTED ACTIVITIES AND AWARDS

2022 ETH Diversity Award

2019 Kriton Kuri Award for Best Paper on Developing Country Waste Management Issues for "Blurred Lines: Agricultural Production On The Margins Of A Dumpsite In Blantyre, Malawi", Seventeenth International Waste Management and Landfill Symposium, Cagliari, Italy, 30 September-4 October, 2019

- **2015** Collaborator: *The Apocalypse Project: House of Futures*, which explores our environmental futures under climate change through the lens of high fashion. http://apocalypse.cc
- Writer and Director of the short film: *Behind the data: the people who make research happen* (5:55 minutes) https://www.youtube.com/watch?v=GPaDrRoflCs
- **2010:** 3rd place: USAID Environmental Health Sanitation Video Contest: *Sanitation, Food Security and Micro-enterprise: Making Struvite from Urine in Nepal*
- 2010 'Magic moments in Development Cooperation', invited story teller for SDC film.
- 2009 Writer and Director of the short film: Sanitation, Food Security and Micro-enterprise: Making Struvite from Urine in Nepal (5:45 minutes) https://www.youtube.com/watch?v=A8F3KcIgscg
- **2009** Poster award presented at the Urban Futures: the Challenge of Sustainability conference as part of the Alliance for Global Sustainability Annual Meeting 2009.
- 2005 National Sciences and Engineering Research Council (NSERC) of Canada Postgraduate Scholarship (PGS M)
- **2005** Hoskins Scientific Student Award: presented for the Best Student Poster at the 59th Canadian Water Resource Association Annual Conference.
- **2005** Philip H. Jones Student Award for best student presentation, 7th Western Canadian Symposium On Water Quality
- 2004 Canadian Institutes of Health Research and Michael Smith Foundation for Health Research Strategic Training Fellowship
- **2003** Innovation and Practicality Award awarded at the WERC Competition for Arsenic Treatment for Small Water Delivery and Domestic Water Systems