Federico Andrade-Rivas (He/Him/El)

PhD – School of Population and Public Health University of British Columbia, BC Mobile phone (+1) 778 8981539

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CURRENT POSITIONS

Northern Contaminants Program (Crown-Indigenous Relations and Northern Affairs Canada) School of Public Health and Social Policy - University of Victoria

November 2023

Post-Doctoral Fellowship

• Research project: Environmental contaminants, nutrition, and human health in Nunavik 2004–2017

School of Population and Public Health, PhD program University of British Columbia

2016 - 2023

Advisor: Dr. Jerry Spiegel

Committee: Dr. Sarah Henderson, Dr. Lael Parrott, Dr. Matilda van den Bosch

Universidad El Bosque Environmental Health Institute

2021 – Present

Assistant Professor

EDUCATION

University of British Columbia Population and Public Health PhD Focus: Environmental Health and Global Health Vancouver, Canada	2023 (November graduation)
University of Cape Town Master of Public Health Honours degree, dissertation with distinction Cape Town, South Africa	2011-2012
Universidad de los Andes BS in Environmental Engineer Bogotá, Colombia	2002-2009
Universidad de los Andes, BA in Anthropology Bogotá, Colombia	2002-2009

PROFESSIONAL AND ACADEMIC EXPERIENCE

City of Vancouver

May – August 2023

Resilience and Disaster Risk Reduction

Sustainability Scholar

• Research and Analysis of Exclusionary Zoning and Environmental Racism in Vancouver.

Global Observatory on Planetary Health The Schiller Institute for Integrated Science and Society Boston College – Harvard University Sept. 2021 – February 2022

Planetary Health Visiting Scholar

• Host Supervisor: Dr. Philip Landrigan

Global Health Research Program University of British Columbia, Vancouver, Canada October 2016 - March 2020

Research Assistant

• RA of the Think, Eat, and Grow Green Globally (TEG3) project funded by the Canadian Institutes of Health Research (CIHR)

Research Vice-Rectory Universidad El Bosque,

August 2014 – August 2016

Bogotá, Colombia

Researcher - Professor

- Research advisor in Environmental Health
- Researcher at the Health, Environment and GIS group, and Human, Work, and Health research group

Exploring the Healthy Cities concept as an strategy to promote health and prevent non-communicable diseases
University of Antioquia–Pan American Health Organization,

March 2014- July 2014

Medellín Colombia

Researcher

- Designing methodology
- Data collection, analysis and report

Access to Health Care services in Medellín: An assessment and monitoring proposal. Universidad de Antioquia – City of Medellín,

Medellín, Colombia

Researcher

- Designing methodology and research activities
- Qualitative data collection, analysis and report

June 2013 – January 2014

Herbicide exposure prevention study for Working for Water Centre for Occupational and Environmental Health Research School of Public Health and Family Medicine University of Cape Town, September 2011- July 2013

South Africa

- Conduct research to understand risk perceptions of herbicides use among Working for Waters workers in the Western Cape
- Conduct research to understand cultural and social factors that might influence workers health-related behaviors.
- Collaborate in the design of a culturally appropriate interventions to reduce workers exposure to herbicides.

Healthy lifestyle behaviors for the prevention of non-communicable diseases in the Global South

INER- ESSM (Research Unit for Exercise Science and Sports Medicine) – African Centre for Cities

Universidad de Antioquia – University of Cape Town

Researcher

- Designing methodology and research activities
- Collaborating on writing reports and projects for founders and participating institutions

INAP

June 2010 - February 2011

January 2012 – June 2013

National Project for Adaptation to Climate Change Conservation International - National Health Institute

Research Design and Implementation

- Characterize the Malaria surveillance system in a Colombian indigenous community with high risk of contagion
- Developing and conducting participatory educational programs to strengthen the National Malaria surveillance System.

AWARDS, FELLOWSHIPS, AND GRANTS

- 2023 University of British Columbia. Valedictorian. Graduate and Postdoctoral Studies;
 Dentistry; Land and Food Systems; Pharmaceutical Sciences; Medicine; Population and Public Health
- 2022 Stanford University. Ethics, Society, and Technology Seed Hub (US\$10,000).
 "Biocultural values for sustainable tourism in Colombia: Engaging, Assessing, and Planning".
 Stanford University 2022. Co-PIs: Federico Andrade-Rivas, Armando Davila Arenas,
 Katherine Hernandez, Gretchen C Daily, Lisa Mandle, Rodolfo Dirzo, Tad Fukami, Natalia
 Ocampo-Peñuela, Alejandra Echeverri
- 2022 UCLA- Pritzker fellowship (US\$7,000). "No music without trees or birds: A spatial analysis of cultural reliance and relationships to endemic flora and fauna species in Colombia". Co-PIs: Federico Andrade-Rivas, Armando Davila Arenas, Katherine Hernandez, Gretchen C Daily, Lisa Mandle, Rodolfo Dirzo, Tad Fukami, Natalia Ocampo-Peñuela, Alejandra Echeverri

- 2022-2024 Stanford University London School of Hygiene and Tropical Medicine. Human and Planetary Health Postdoctoral Scholar, (USD \$160,000) (*Declined*)
- 2021 -2022 University of Brish Columbia Friedman Award for Scholar in Health (USD \$20,000)
- 2021 University of British Columbia President's Academic Excellence Initiative PhD Award (USD \$1,000)
- 2019-2020 School of Population and Public Health, University of British Columbia. Professor Anne Crichton Prize (Best Thesis Proposal) (USD \$1,000)
- 2018 2021 Canadian Institutes of Health Research- CIHR. Vanier Scholar (USD \$120,000)
- 2017 The Lancet The Rockefeller Foundation. Travel Grant Planetary Health Alliance
- 2016 University of British Columbia Graduate Global Leadership Fellowship (USD \$40,000)
- 2016 Green College's R. Howard Webster Foundation Fellowship (USD \$2,000)
- 2016 Colciencias, International PhD Scholarship (USD \$100,000)
- 2015 and 2016 Universidad El Bosque Excellence Publication Award (USD \$1,000)
- 2015 Universidad El Bosque Convocatoria Interna, Research Grant (USD \$10,000)
- 2013 University of Cape Town. Degree Dissertation with distinction, Master in Public Health
- 2012 University of Cape Town JW Jagger Centenary Gift Scholarship
- 2011 Colfuturo Colombia Scholarship Master Degree (USD \$35,000)
- 2010 Colombian delegate for the NMC Italy (Young International Meeting of social entrepreneurs)
- 2008 Eighth place nationally in the Environmental Engineer ECAES (National State Exam of Higher Education Quality)
- 2007 Ashoka Inter-American Development Bank MTV Television. Changemaker
- 2006 Procter & Gamble. Prestige Scholarship Puerta a la Excelencia (USD \$3,000)

PUBLICATIONS

*Peer-reviewed journals (in English and Spanish**)*

- Andrade-Rivas F, Paul N, Spiegel J, Henderson S, Parrott L, Delgado-Ron A, Echeverri A, van den Bosch M. Mapping potential population-level pesticide exposures in Ecuador using a modular and scalable geospatial strategy, GeoHealth. 2023 Jul; 7:e2022GH000775
- Delgado-Ron A, **Andrade-Rivas F.** Unwanted or mistimed pregnancy and developmental issues in Ecuadorian children aged 3 to 5: a doubly robust estimate using data from the National Health and Nutrition Survey 2018, Matern Child Health J. 2023 June: 1-11
- Feged-Rivadeneira A, Andrade-Rivas F, González-Casabianca F, Escobedo F. Scaling patterns of human diseases and population size in Colombia, Glob Environ Chang. 2022 Jul; 75:102546
- **Cabezas, L, Sanabria-Marin R, **Andrade-Rivas, F**, Darghan A, Olano VA. Relationship between environmental variables and the spatial distribution of the Aedes aegypti mosquito in rural Colombia, Rev. Salud Bosque. 2022 May;12(1):1-18
- Andrade-Rivas F, Afshari R, Yassi A, Mardani A, Taft S, Guttmann M, Rao AS, Thomas S, Takaro T, Spiegel JM. Industrialization and Food safety for the Tsleil-Waututh Nation: An Analysis of Chemical Levels in Shellfish in Burrard Inlet, Environ Res. 2022 Apr; 206: 112575

- **Andrade-Rivas F, Giraldo C, Yepes A, Estrategia de Entornos de Trabajo Saludables en el Sector Informal: perspectiva de los actores, Rev Col Enf, 2021; 20(1):e028
- Rossa-Roccor V, Acheson ES, Andrade-Rivas F, Coombe M, Ogura S, Super L, et al. Scoping Review and Bibliometric Analysis of the Term "Planetary Health" in the Peer-Reviewed Literature. Front Public Health. 2020;8.
- Thurston AM, **Andrade-Rivas F**, Spiegel JM. Results Communication in Breast Milk Biomonitoring Studies. Health Hum Rights. 2019 Jun;21(1):63–79.
- **Vásquez-González JC, **Andrade-Rivas F**. Construcción experta del espacio vivido en Medellín. Caso Parques del Río. Bitácora Urbano Territ. 2019 Dec;29(3):109–16.
- **Andrade-Rivas F,** Romero M. Misinformation About HIV and Negative Attitudes Toward Homosexuality and Same-Sex Couples' Rights: The Case of Colombia. Int J Public Opin Res. 2016 May 4;edw011.
- **Andrade-Rivas F**, Rother H-A. Chemical exposure reduction: Factors impacting on South African herbicide sprayers' personal protective equipment compliance and high risk work practices. Environ Res. 2015 Oct;142:34–45.
- **Restrepo-Zea JH, Silva-Maya C, **Andrade-Rivas F**, VH-Dover R. Acceso a servicios de salud: análisis de barreras y estrategias en el caso de Medellín, Colombia. Gerenc Políticas Salud. 2014 Dec 19;13(27):242–65.

Manuscripts in Progress (Full manuscripts available upon request)

- Andrade-Rivas F, Okpani AI, Lucumí DI, Castillo MD, Karim, ME. (Submitted: Annals of Epidemiology, AEP-D-23-00900) Epidemiological insights into neonatal deaths: The role of cooking fuel pollution in Colombia
- Little M, Kenny TA, Ayotte P, Aker A, **Andrade-Rivas F**, Lemire M (Public Health Nutrition, PHN-2023-0433.R1) Wild fish consumption and latitude as drivers of vitamin D status among Inuit living in Nunavik, northern Québec
- Echeverri A, Batista NM, Wolny S, Herrera GA, **Andrade-Rivas F**, Bailey A, Cardenas-Navarrete A, Dávila-Arena A, Díaz-Salazar F, Hernandez CV, Langhans KE, Mateus-Aguilar B, Levey D, Neill A, Nguyen O, Suárez-Castro AF, Zapata F, Ocampo-Peñuela N. (Submitted: People and Nature, PAN-23-12-683). Toward Sustainable Biocultural Tourism: An Integrated Spatial Analysis of Cultural and Biodiversity Richness in Colombia
- Hernandez K, Andrade-Rivas F, Zapata F, Batista N, Cardenas-Navarrete A, Dávila-Arenas A, Arenas AD, Herrera GA, Langhans KE, Levey D, Neill A, Nguyen O, Ocampo-Peñuela N, Sánchez Lopez S, Echeverri A. (Submitted: Biological Conservation). Can't carve air, can't weave names: Plant species used in Colombian artisan crafts are not equally assessed for vulnerability at the international and national level.
- **Andrade-Rivas F**, Delgado-Ron A, van den Bosch M, Spiegel, J, Parrott L, Henderson, S. (In prep) Agricultural pesticide exposures in Ecuador and their association with perinatal outcomes: a combined cluster detection and spatial Bayesian modelling approach
- Andrade Rivas F, Kassem, H, Cassidy-Matthews, C, Parrott L, Spiegel J. (In Prep).
 Community engagement in Indigenous Food systems contamination studies: A scoping review and lessons from the field
- Feged-Rivadeneira A, González-Casabianca F, Parra-Salazar A, Salcedo-Ortiz J, Andrade-Rivas F, Cárdenas P, Morales A, Damelines-Pareja J, Rios-Oliveros D, Salazar C, Usma S, Muñoz M, Patiño L, Ballesteros N, Ramírez J, Ángel A, Rodríguez T, Cascante Vega J, Galindo-Silva H, Majerowicz S, Corredor V. (In prep). Using Big Data and Network Theory to Inform Decision-making on COVID-19 in Bogotá

- Andrade-Rivas F. (Guest speaker Panelist) "Human Health and the Environment" Pacificnorthwest Health Equity Network (Former BCCI), University of British Columbia, 2023
- Andrade-Rivas F, Afshari R, Yassi A, Mardani A, Taft S, Guttmann M, Rao AS, Thomas
- S, Takaro T, Spiegel JM. "Approaches to advancing healthy and sustainable food systems:
 Lessons from the Tsleil-Waututh Nation's struggle to establish sovereign management of
 resources". 8th Biennial EcoHealth Conference, University of Kwazulu-Natal, Durban (South
 Africa), 2022
- **Andrade-Rivas** F, Paul N, Spiegel J, Henderson S, Parrott L, Delgado-Ron A, Echeverri A, van den Bosch M. "Mapping potential population-level pesticide exposures using a modular and scalable geospatial strategy". Planetary Health Alliance Meeting, Harvard University, Boston (USA), 2022
- Andrade-Rivas F. (Guest speaker Panelist) "Hacia una mirada "glocal" de la salud planetaria y la contaminación de los sistemas alimentarios" Simposio Salud Ambiental - XII Congreso Nacional de Toxicología, Universidad de Guanajuato, Guanajuato (Mexico), 2022
- Andrade-Rivas F. (Guest speaker) "Apropiación social de la investigación científica y artística: Hacia la transformación de las condiciones de vida y la construcción colectiva del conocimiento". XXVII Congreso Institucional de Investigaciones Universidad El Bosque, Bogota (Colombia), 2021
- Delgado-Ron A, **Andrade-Rivas F.** "The effect of unintended pregnancies on the early child development of Ecuadorian children". Tri-Cluster Research Day: The Future of Health, University of British Columbia, Vancouver (Canada), 2021
- **Andrade-Rivas F. (Guest speaker Panelist) "Equidad y justicia social: la imperativa moral de la salud planetaria", Primer Congreso Latinoamericano de Salud Planetaria, Universidad de Costa Rica – Planetary Health Alliance – Lancet Countdown, San Jose(Costa Rica), 2021
- Rossa-Roccor V, Acheson E, **Andrade-Rivas F**, Coombe M, Ogura S, Super L, et al. "Mission accomplished? A scoping review and bibliometric analysis of the term "planetary health" in the peer-reviewed literature". Planetary Health Alliance Meeting, Stanford, Stanford (USA), 2019. Selected for proceedings publication: Lancet Planet Health. 2019 Sep 1;3:S17.
- Andrade-Rivas, F. "Bananas, roses, shellfish, and crabs: chemical pollution and planetary health in traditional and indigenous communities across the globe". Cascadia Annual Symposium on Environmental, Occupational, and Public Heath, Blaine (USA), 2019
- **Andrade-Rivas, F.** "Communicating results in environmental contamination studies: Considering challenges and approaches for ethical global health research.", 7th Biennial EcoHealth Conference, Cali (Colombia), 2018
- Thurston, A, **Andrade-Rivas, F**, Spiegel, J. "A scoping review of community engagement in environmental contamination studies: Considering challenges and approaches for ethical global health research" Ethical Challenges and Issues in Global Health Research, Montreal (Canada), 2016
- Rother, HA **Andrade-Rivas, F**, and DeSouza, M. "When Standard Occupational Exposure Assessments Are Unsuitable Exposure Observations with South African Herbicide Sprayers". Occupational and Environmental Medicine 71, no. Suppl 1 (June 1, 2014): A116–A116. doi:10.1136/oemed-2014-102362.366.
- **Restrepo-Zea JH, Silva-Maya C, Andrade-Rivas F, VH-Dover R. Acceso a los servicios de salud en la ciudad de Medellín: Caracterización y propuesta para el monitoreo y la vigilancia" (Access to Health care: assessment and monitoring proposal), Conference, VI Congreso Iberoamericano de Investigación Cualitativa en Salud, Medellín, 2014
- **Silva-Maya C, **Andrade-Rivas F,** Restrepo-Zea JH, VH-Dover R "La cartografía social en la caracterización del acceso a los servicios de salud en la ciudad de Medellín" (Social

- cartography applied to Health care Access issues in Medellín, Colombia), Conference, VI Congreso Iberoamericano de Investigación Cualitativa en Salud, Medellín, 2014
- **Andrade-Rivas, F "Influencia de la percepción del riesgo y el contexto social en el uso de Equipo de Protección: El caso de aplicadores de herbicidas en Sudáfrica", Conference, VI Congreso Iberoamericano de Investigación Cualitativa en Salud, Medellín, 2014
- **Andrade-Rivas, F "El acceso a los servicios de salud en Medellín ¿es posible un goce efectivo y ejercicio ciudadano del derecho a la salud?", Seminario Configuraciones Ciudadanas en contextos de transición y globalización, Universidad de Antioquia, Medellín, 2014

Other publications

- **"Acceso a los servicios de salud en la ciudad de Medellín: caracterización y propuesta para el monitoreo y la vigilancia" GES (Grupo Economía de la Salud) e INER (Instituto de Estudios regionales) de la Universidad de Antioquia. Publicación de la Secretaría de Salud de Medellín y en proceso de publicación en revista indexada (2014)
- **"Respuesta al incremento de la exposición de vectores de enfermedades tropicales (malaria y dengue) inducidos por el cambio climático. Componente Social" Instituto Nacional de Salud – Conservación Internacional, 2010
- Master of Public Health dissertation: "Influence of risk perceptions and social context on Working for Water herbicide sprayers Personal Protective Equipment (PPE) compliance in the Western Cape of South Africa", University of Cape Town, 2013
- **Environmental Engineering thesis. "Degradación de la cuenca del rio Magdalena: una mirada desde algunos indicadores sociales y los servicios ambientales asociados al agua", Universidad de los Andes, 2008

AD-HOC REVIEWS FOR JOURNALS AND CONFERENCES

Science of the Total Environment (n = 1), Environmental Research (n=1), Global Health Promotion (n=1), Renewal Agriculture and Food Systems (n=1), International Journal of Health Policy and Management (n=1), Frontiers in Public Health (n=1), Revista Gerencia y Políticas de Salud (n=1), Revista Hacia la Promoción de la Salud (n=1), Revista Ingenieria UniValle (n=1), Revista Nacional de Enfermeria (n=1), UBC and BC Children's Hospital Global Health Conference 2021, Congreso Universidad El Bosque 2021, Universidad El Bosque Master external examiner (n = 3), UBC Graduate Student Symposium 2017

SOCIETY AND COLLECTIVES MEMBERSHIPS

Pacific-northwest Health Equity Network (PHEN) Leadership Team, Planetary Health Alliance Emergent Scholar, UBC Planetary Health Club (co-founder), Planetary Health Alliance Regional Hubs - Latin America, Mesa Técnica Ciudadana y Académica por la Calidad del Aire

TEACHING, ACADEMIC SEMINARS, AND GUEST LECTURER

Faculty of Nursing

August 2015 – present

Universidad El Bosque, Bogotá, Colombia Lecturer

> Mixed Methods in Public Health Research, Graduate Online Course, Master of Community Mental Health and Master of Reproductive and Sexual Health

School of Population and Public Health

2018 – present

University of British Columbia, Vancouver, Canada Guest Lecturer

• Overview of Global Health (Graduate)

Professor: Gina Ogilvie

• Social Determinants of Health (Graduate)

Professor: Anne Gadermann

• Topics in Environmental Health (Undergraduate)

Professor: Kate Weinberger

Topics in Environmental Health (Graduate)

Professor: Anders Erickson

School of Government and Public Transformation

January 2023

Tecnológico de Monterrey, Monterrey, Mexico Invited Seminar

• Talk: "Mapping potential population-level pesticide exposures in Ecuador using a modular and scalable geospatial strategy"

Biology Department

November 2021

Boston College, Chesnut Hill, Massachusetts Invited Seminar

• Talk: "Planetary Health Across Scales: From local collaborations to global pollution issues"

Natural Capital Project

September 2021

Woods Institute for the Environment and Department of Biology Stanford University, Stanford, California Natural Capital Webinar Series

• Talk: "Planetary Health Across Scales: From local collaborations to global pollution issues"

Global Observatory of Polution and Health

Boston College, Boston, Massachussets Guest Lecturer February 2021

 Children's Health and the Environment Course Professors: Phillip Landrigan and Britt Pados

Department of Indigenous Studies

October 2020

University of Winnipeg, Winnipeg, Canada Guest Lecturer

> Ethnoecology Research Course Professor: Shailesh Shukla

School of Population and Public Health

University of British Columbia Vancouver, Canada Teaching Assistant September 2018 – December 2019

- Topics in Environmental Health (Undergraduate)
 Course Professor: Matilda van den Bosch
 Role: designing and facilitating weekly workshops
- Topics in Environmental Health (Graduate) Course Professor: Anders Erickson
- Global Health and Human Security Course Professor: Jerry Spiegel

Faculty of Engineering

October 2014

Universidad de los Andes Bogotá, Colombia Guest Lecturer

Introduction to Environmental Engineering

Faculty of Social Sciences

2005 - 2008

Universidad de los Andes Bogotá, Colombia Teaching Assistant

- Introduction to Anthropology (4 times)
- History, Technology and Society

STUDENT MENTORING

*Master thesis advisor (in English and Spanish**)*

- **Jenny Melisa Amaya Silva, Lilibeth Suarez, Master in Community Mental Health
 Thesis: Trayectorias de vida asociadas al consumo de sustancias psicoactivas en jóvenes con
 historia de habitabilidad de calle egresados de procesos de formación en instituciones
 distritales en Bogotá
- **Julio Eduardo Mazorco Salas, Master in Community Mental Health
 Thesis: Representaciones sociales de salud mental en los miembros de una universidad
- **Juan Camilo Vásquez, Master in Sociospatial Studies at Universidad de Antioguia, Colombia

Thesis: Diseño del Espacio y el Espacio de Representación: Concepción Experta en el proyecto Parques del Río Medellín

Master thesis examiner

- **Luis Ignacio López Michelena, Master in Occupational Health
 Thesis: La experiencia de la soledad en el teletrabajo: un análisis desde la fenomenología
- **Fiorella Robayo Ospina, Master in Community Mental Health
 Thesis: Transformaciones de las identidades masculinas en hombres diagnosticados con lesión
 medular traumática vinculados al conflicto armado de Colombia: una exploración a través de
 sus historias de vida

Graduate Diploma advisor

- **María Mónica Molano, Graduate Degree in Occupational Health
 Researh Project: Percepción Acerca de la Seguridad y Salud en el Contexto del Trabajo
 Informal en un Grupo de Mujeres Trabajadores de la Localidad de Tunjuelito
- **Diana Velásquez, Graduate Degree in Occupational Health Research Project: Situación actual de la Salud Ocupacional en Colombia: Una mirada histórica

Graduate Mentorship Program, School of Population and Public Health

• Nasim Niknejad, PhD student

Undergraduate students- supervised a directed readings course or undergraduate projects:

- David Choung (Boston College Biology, 2021)
- Alyssa Thurston (UBC Biology 2019)
- Co-mentored six undergraduate student in their GIS research projects (UEB, 2014-2016)

LEADERSHIP AND SERVICES

Mesa Técnica Ciudadana y Académica por la calidad del Aire (MeCAB)

2019 - present

Bogotá, Colombia Researcher - Volunteer

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• Participatory space where we work together with activists, community members, policy makers and scholars to improve Bogotá's air quality

La Comarca, Civil Society Natural Reserve

2016 - present

Choachí, Colombia Co-director

- Mission: Restore local ecosystems, particularly two river sources
- Collaborated to develop a network of private natural reserves
- Sharing knowledge with rural communities to improve human well being and the quality of the local ecosystems

Graduate Student Ambassador

2019

University of British Columbia Volunteer

> Guided prospective and newly admitted graduate students and advised them in their selection and transition to graduate school

La Ciudad Verde (The Green City)

April 2013 - 2019

Bogotá, Colombia Researcher -Volunteer

> Working together with activists, community members and academics to design interventions to improve the sustainability and health of our cities

Tierra Nativa and Guarino

2002 - 2010

Asociación Santa Cruz Project Director Volunteer

- Director of "Guarino", an outdoor educational project for low-income youths of Bogotá.
- Co-director of "Tierra Nativa", an expedition program which aims to reach the most remote populations with aid and social work
- Consolidated Guarino Project in the international sphere, through distinctions such as "Change Maker" (Ashoka, IDB youth) and NMC (World Youth Meeting)

ADDITIONAL INFORMATION

- Computing Skills: R, QGIS, Nvivo, ArcGIS, ENVI, SAS
- Relevant Training: Instructional Skills Workshop (UBC Centre for Teaching and Learning);
 Assessing & Communicating Risk (The Society of Toxicology of Canada)