

BROOK TESSEMA

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PROFILE:

Enthusiastic and determined graduate studied pursuing a Masters of Geomatics in Environmental Management. Skilled in performing data analysis, utilizing geo-spatial tools, and creating impactful visualizations to inform adaptation planning. Experienced researcher with proficiency in qualitative and quantitative analysis of climate change trends and impacts that aim to build climate resilience for communities and stakeholders. I'm seeking opportunities in which I can apply my strong research, data analysis, critical thinking and problem-solving skills to support informed decision making in environmental management and sustainable development initiatives.

EDUCATION:

Masters of Geomatics in Environmental Management (MGEM)

Capstone Project: Monitoring Mangrove Restoration in Madagascar Using Sentinel-2 Imagery and Google Earth Engine

August 2024 - Present
University of British Columbia, BC

Bachelor of Environmental Studies (BES Honors)

Specialization: Urban and Regional Environments
Certificate in Geographic Information Systems (GIS) and Remote Sensing

September 2017 - June 2021
York University, Toronto, ON

PROFESSIONAL EXPERIENCE:

Climate Risk Institute (CRI)

Analyst - Climate Adaptation and Resilience
Adaptation Research Assistant
Climate Change Adaptation Intern

Sudbury, Ontario (Remote)
July 2023 – July 2024
July 2022 – July 2023
July 2021 – July 2022

RESEARCH AND PROJECT EXPERIENCE:

Expanding and Maintaining the Map of Adaptation Actions

Canadian Center for Climate Services (CCCS)

November 2021 – Present
Case Study Developer

- Drafted 30 on the ground adaptation projects/case studies for the CCCS' Map of Adaptation Actions.
- Conducted 10 interviews to solicit information for case studies with a limited amount of publicly available information.
- Established Excel based tools for tracking and managing case studies and interviews by topic, climate issue, sector, adaptation stage, and location.
- Conducted a Gaps Analysis study to identify limitations of existing case studies on the map in terms of coverage, climate issues, and sector.

Durham Region Flood Risk Communication and Capacity Building

The Regional Municipality of Durham

July 2021 – July 2023
Project Support

- Conducted literature review and desktop research by reviewing 40+ jurisdictions on the best practices for flood risk messaging and communication and published findings.
- Supported in facilitating 4 workshops with the 6 municipalities and 5 conservation authorities in Durham Region to present findings of best practices and consulted their needs and gaps to address.
- Sourced and organized demographic data for Durham Region to support in mapping social-vulnerability and flood risk and identify high risk areas for targeted flood risk communication and engagement.
- Developed content for public facing website ([Flood Ready Durham](#)) and resource hub on flood risk and emergency preparedness for Durham region residents.

Climate Change Information for Indigenous Communities in Bruce, Grey, and Huron Counties

Bruce Power and Council of Great Lakes Region (CGLR)

April 2021 – March 2022
Project Support

This project included robust research, presentation delivery and the development of information products focused on assessing climate change impacts, risks, and opportunities for Indigenous communities in the counties of Bruce, Grey, and Huron.

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- Conducted literature reviews on the impact of a changing climate on alvar and cliff habitats of Bruce Peninsula and Lake Huron to develop a risk registry that scored the likelihood and severity of different climate hazards in the regions.
- Collaborated with Historic Saugeen Métis, Saugeen Ojibway Nation, and Métis Nation of Ontario to develop narratives that integrate cultural and socio-economic impacts of a changing climate with the risk registry findings.
- Co-created an [ArcGIS Story Map](#) to present climate trends, impacts and opportunities for each of the habitats within the three traditional lands.

Low Carbon Buildings Training (LCT) for Professional Engineers

April 2023 – Present

Canadian Green Building Council (CAGBC)

Lead Facilitator

- Supported 10 subject matter experts with curriculum development for the [Building Skills for Climate Change](#) LCT for professional engineers that aimed to train and reskill engineering and infrastructure practitioners to advance low carbon construction in Canada
- Led CRI's collaboration with Engineers Canada to create a communications plan and marketing strategy that secured 280 participants for the six-week online course.
- Developed the registration form for all course offerings and oversaw communication and participant requests throughout the entire process.
- Currently leading the facilitation of 2 out of 5 online offerings which include supporting the instructor with Zoom set up, delivering introductory and concluding remarks, and promptly addressing participant requests.

PRESENTATIONS AND PUBLICATIONS:

Flood Risk and Social Vulnerability: Using Data to Guide Adaptation Action

August 2023

Toronto Climate Researcher Workshop @ Toronto Climate Observatory

AWARDS & CERTIFICATIONS:

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|---|---------------------|
| • Management of Climate Risk for Infrastructure Professionals (<i>Audited Online Course</i>) | October 2023 |
| • Magna Cum Laude distinction with Certificate in Geographic Information Systems (GIS) and Remote Sensing | Jun 2021 |
| • Member of Dean's Graduating Honour Roll | Jun 2021 |
| • Resilient Recovery for People and Planet from The World Bank Group | Jun 2021 |
| • York University Continuing Student Scholarship for Outstanding Academic Achievement | August 2018 |
| • UN Sustainable Development Goals: Advocacy and Implementation | October 2017 |

SKILLS:

- **Literature Review & Research:** Conducting thorough review of journals and papers around a research question or topic.
- **Written & Verbal Communication:** Utilizing Microsoft Word to produce articles, reports, case studies and Microsoft PowerPoint to deliver presentations, webinars, workshops on various topics.
- **Data Analysis:** Used Excel, & Air Table to organize and analyse qualitative and quantitative (climate data, risk assessments) data to create informative visualizations that clearly demonstrate trends and patterns.
- **Geospatial Analysis:** Used geo-spatial tools from QGIS, ArcGIS Pro and PCI Geomatica to conduct analysis and create informative maps and visuals.
- **Interview Design and Conduction:** Created interview questions and tools to gather qualitative data on 4 different research projects and successfully led interview process on two projects.
- **Workshops & Webinars Facilitation:** Facilitated 3 workshops to gather input on research objectives. Hosted 6 webinars with forestry adaptation experts for 200 members.