Current and Wise Practices for Assessing Climate Risk in British Columbia

Considerations, Principles, and Recommendations for Climate Risk Assessment Frameworks in British Columbia, Canada

EXECUTIVE SUMMARY

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Disclaimer

This report was produced as part of the UBC Sustainability Scholars Program, a partnership between the University of British Columbia and various local governments and organizations in support of providing graduate students with opportunities to do applied research on projects that advance sustainability across the region.

This project was conducted under the mentorship of the Fraser Basin Council staff. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of the Fraser Basin Council or the University of British Columbia.

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The basis of this project is heavily informed by the Indigenous activists, scholars, leaders, and voices who have provided existing guidance and considerations towards *meaningfully* engaging in traditional ecology knowledges in climate risk assessments (CRA). This work is explored further, but not exhaustively, in the report, and the findings are meant to reflect the core principles that have been set forth in part by the Risk to Resilience Report (2024) done by Janna Wale and Brett Huson from the Yellowhead Institute. Incorporating Indigenous knowledge and perspectives is not just an equity issue, it is a path forward in effective and actionable CRAs.

The author acknowledges that the work for this project took place on the unceded ancestral lands of the šxʷməθkʷəy̓əmaʔɬ təməxʷ (Musqueam), Skwxwú7mesh-ulh Temíx̱w (Squamish), and səlilwətaɬ (Tsleil-Waututh) Nations.

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Introduction

British Columbia's Ministry of Emergency Management and Climate Readiness has a mandate letter commitment to develop risk assessments at both the provincial and regional scales. The first phase, a provincial scale assessment, is now complete. Work is underway on the next phase, which will align with the Emergency and Disaster Management Regulation for provincial ministries and support future assessments. These assessments mark a significant shift in the Province of British Columbia's approach to disaster and climate risk management, not only in terms of scale but in methodological and relational complexity.

This report, prepared by a UBC Sustainability Scholar under the mentorship of the Fraser Basin Council (FBC), investigates wise practices and guiding principles for climate risk assessment frameworks to inform the next phase of risk assessments. The Fraser Basin Council supervised the scholar who is writing the report. FBC is a charitable non-profit that brings together stakeholders across B.C. to address environmental challenges and develop sustainable development priorities (FBC, n.d.). As a result, this report provides a high-level overview of important considerations, principles, and actionable recommendations in thinking about climate risk assessment (CRA) frameworks.

Background

Today, the widespread definition of climate risk is drawn from the Intergovernmental Panel on Climate Change (IPCC) established by the United Nations in 1988. Their 2020 definition of climate risk rests on the three components of hazard, vulnerability, and exposure (IPCC, 2020). CRA frameworks are also reflective of their methodological approach, which spans quantitative, qualitative, mixed methods and/or top-down and bottom-up leadership (CCME 2021).

Research Approach

This research was conducted through an academic and grey literature review, seven semi-structured interviews, and case study analysis over the course of three months. Interviews were conducted with seven participants who represented practitioners working across climate risk, engagement, resilience, and adaptation. The identified frameworks used for the case study portion of the report were the Impact Chain approach, Resilience Framework, and Building Adaptive and Resilient Communities (BARC) Framework. The case studies were based in Halmstead, Sweden, the Yukon, and the Sunshine Coast, respectively (André et al., 2022; Government of Yukon, 2022; Local Governments for Sustainability Canada, & Sunshine Coast Regional District, 2022).

Summary

Rather than proposing a single, one-size-fits-all framework, the report identifies three interdependent guiding principles for climate risk assessment frameworks and how they can be enacted through sample recommendations.

- **Centering Relationship-Building and Maintenance**: Effective climate risk assessments rely not only on data but on trust, collaboration, and existing connections. Meaningful engagement and communications that foster relationships between governments, First Nations, consultants, and communities are the channels through which resilience is enhanced and strengthened.
- **Mobilizing Place-Based Knowledge**: Risk assessments must be attentive to the social, ecological, and historical contexts of the areas they cover. Place-based knowledge and Indigenous Knowledge are critical for understanding community vulnerability and resilience. Local ways of knowing must be upheld in assessment design, data interpretation, and adaptation planning.
- **Commitment to Transparency**: Transparency, in process, scope, and influence, is essential to building legitimacy and trust. Clear communication about decision-making, data use, and engagement intentions promotes meaningful exchanges, empowers communities, and supports long-term resilience planning.

Ultimately, the report suggests that the success of future risk assessments in B.C. will depend on the ability to cultivate processes that have embedded flexibility to inhabit these principles as practitioners see fit, based on the existing context and relationships. Centering the values of transparency, relationship, and place, is important for laying the groundwork for meaningful climate risk assessments.

Recommendations

The recommendations in this report are meant to *enable* community participation in the future risk assessments, instead of *imposing* processes onto a community. These recommendations are meant to help root the CRA process in building and maintaining relationships, place-based inquiry and engagement, and a commitment to communication and transparency. The most important aspect of enabling these recommendations is flexibility, which is a key finding from the interviews, literature review, and the three case studies. The below actionable recommendations are organized in a high-level way based on the phase in which they would be appropriately considered.

Before the Risk Assessment

- Embed flexibility of timelines and approaches in framework design.
- Invite community leaders, consultants, non-profits, and other key partners to provide input on scale and scope.
- Work towards milestones, co-developed alongside key partners, instead of adhering to a prescriptive timeline of events.
- Invest adequate time to build contextual knowledge and research existing resilience efforts, with findings summarized in a report. Validate findings with key partners. Note opportunities for common ground between partners at larger scales.
  Co-develop a comprehensive Memorandum of Understanding (MOU) that outlines roles and responsibilities of involved parties, including communities, practitioners, and other entities.

During the Risk Assessment

- Build on or align efforts with existing local resilience efforts.
- Designate key representatives who can communicate directly with communities and practitioners as concerns or questions arise. Representatives can change throughout the process, but this should be communicated clearly.
- Encourage a reflexive process for communities and practitioners involved, iteratively asking questions such as:
  - *What is working?*
  - *What isn't working?*
  - *How does this decision or action reflect relationship-building/maintaining, transparency, and place-based inquiry?*
- Measure and share outputs from engagement in a "What We Heard" style report (e.g., impact chains, lists of representation, graphic facilitation summaries, photos etc.) to demonstrate the different ways of knowing that were acknowledged and embedded into the work. Be clear about efforts and success of accessibility accommodations made to hear from diverse groups.
  With key partner input, decide on a minimum amount of engagement to be conducted in-person. Project staff should make every effort to visit sites of communities' existing resilience efforts, as invited.

Measures to Support Longevity

- Compensate partners for their time. If a champion model is used, ensure the position(s) is/are appropriately funded.
- Discuss capacities to monitor and review project outcomes with key partners for long-term resilience results. Continuous learning and compensation are key components.
- Document successes and challenges throughout the project and share findings with communities and practitioners. This knowledge can inform individual approaches to conducting risk assessments moving forward.

References

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