Climate Change and Health: A Research Agenda for BC

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Executive Summary

Some of the health impacts of climate change are already being felt in BC. A preliminary assessment from the BC government in 2019 identified wildfires, seasonal water shortages, heat waves, coastal and riverine flood events, glacial loss and long-term water shortage as high risks for the Province under climate change (BC Preliminary Strategic Climate Risk Assessment 2019). Our health system will face increased stress in this warming future and we will need to adapt as the climate continues to change.

As part of the Adaptation Canada 2020 conference, 58 participants were invited to take part in a cross sectoral discussion of BC's current research needs and priorities for action regarding climate change and health. Invitees were from health authorities, provincial, federal, Indigenous and academic organizations. Priorities identified across sectors included:

- o Identifying and creating provincial governance and leadership structures
- o Creating and supporting a provincial knowledge infrastructure
- o Working with Indigenous Peoples and communities
- o Creating accountability mechanisms

Though the specific contributions of each sector to these four areas are somewhat distinct, all four areas posed both challenges and opportunities for each sector. One of the first steps toward a more robust health-oriented response to climate change mitigation and adaptation was to invite all participants to join the BC Climate and Health Network. The network provides a platform to share knowledge, resources and an opportunity to continue the conversation.

Introduction

As part of the Adaptation Canada 2020 conference, 58 participants were invited to take part in a 90-minute invite-only discussion of the climate and health research needs and priorities for action in BC. Invitees included representatives from Indigenous organizations and communities; BC's five regional and two provincial health authorities; the provincial and federal government; research institutions; and funding agencies. The questions that informed the event included:

- o What research is needed to meet the health specific challenges of a changing climate in BC?
- o What are the most important climate solutions that need to be tested in BC?
- o What policies currently exist to protect people in BC from health risks linked to climate change?
- o How can we best capture opportunities that improve health outcomes and address climate change?

Participants were invited to contribute both in person and through a short online survey. The anonymous online survey was available for one week prior to the event and was sent to all invitees. Twenty-one people completed the online survey and 31 people attended the live dialogue session.

During the event, the results of the online survey were shared as well as a summary of BC's recent climate risk assessment. The 31 guests were then given the opportunity to discuss the research priorities within their particular sector, and then asked to form discussion groups with participants from each sector to examine potential intersectoral action.

The session closed with an invitation for participants not already participating in the BC Climate and Health Network (formerly Climate Change Health Policy Group) to join.

Survey Results

The online survey included four questions. The first was a multiple-choice question that asked participants what sector they worked in. People participated in the survey from across sectors with the majority working in health and research.
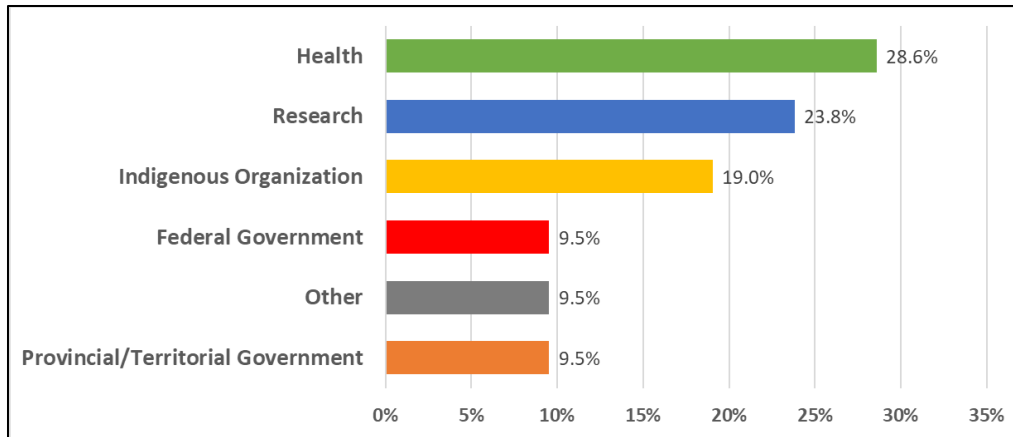
Q2 - What do you think is the most important gap in research regarding climate change and health?

- Indigenous knowledge
- Evaluating the effectiveness of adaptation strategies
- Attribution of health effects to changes in climate
- Implementation research
- Quantifying health effects
- Understanding the impacts on vulnerable populations
- Climate change in relation to other eco-social issues
- Including health in climate models
- Locally relevant indicators
- Climate change surveillance systems
- Vulnerability of health-related infrastructure
- Accessible and equitable knowledge exchange
- Case studies
- Long term health effects
- Community driven priorities
- Mental health impacts
- Displacement of people
- Non-political evidence that informs policy
- Co-benefits of climate change adaptation and mitigation
- forest fire/smoke impacts on community health
- Cumulative impacts on community health
- Real time data

Q3 - What would you need to move climate change and health research forward in your organization or work context?

- Funding
- Collaborative partnerships (public and private sectors)
- Skilled/knowledgeable workforce
- Research capacity
- Training for culturally safe engagement and research
- Humility, listening and respecting different ways of knowing

- Access to climate scientists
- Support from senior leadership
- Fewer competing demands for time
- Policy changes
- Linkages across health sectors
- Knowledge exchange opportunities
- Capacity to respond to requests
- Provincial co-ordination

Participants also shared the following resources:

Climate Interactive
https://www.climateinteractive.org/programs/multisolving/

Minoayawin: Manitoba Flood Healing Voices
https://manitobafloodhealingvoices.com/

Tsleil-waututh Nation Burrard Inlet Action Plan
https://twnsacredtrust.ca/burrard-inlet-action-plan/

Ontario Climate Change and Health Toolkit
https://peel.andornot.com/PDF/Climate_Change%20_Health%20Toolkit.pdf

Assessment of Vulnerability to the Health Impacts of Climate Change in Middlesex-London
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=2ahUKEwik-P2vgc3nAhVIQ6wKHSSwCggQFjABegQIBBAB&url=https%3A%2F%2Fwww.healthunit.com%2Fuploads%2Fassessment-of-vulnerability-to-the-health-impacts-of-climate-change-in-middlesex-london.pdf&usg=AOvVaw0ODHOtAvmj9tPkz_gpn10j

WHO: Protecting health from climate change: vulnerability and adaptation assessment
https://www.who.int/globalchange/publications/vulnerability-adaptation/en/

Health Canada: Climate change and health: Health effects
https://www.canada.ca/en/health-canada/services/climate-change-health.html

Ontario Ministry of Health and Long-Term Care: Healthy Environments and Climate Change Guideline, 2018
http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Healthy_Environments_and_Climate_Change_Guideline_2018_en.pdf

Public Health Responses to Wildfire Smoke
http://www.ncceh.ca/sites/default/files/Responding%20to%20Wildfire%20Smoke%20Events%20EN.pdf

The Swinomish Indian Tribal Community Prepares for Climate Change Impacts
https://toolkit.climate.gov/case-studies/swinomish-indian-tribal-community-prepares-climate-change-impacts

Sectoral Conversations

Participants who attended the in-person dialogue organized themselves into three sectors: health, government and academic. Health sector participants included representatives from regional and provincial health authorities as well as national public health agencies. Participants from government included the BC Provincial government, federal government and Indigenous governance bodies. Academics included researchers from universities in BC and Washington State.

Participants were asked to identify research priorities of particular significance to their sector and add to the list that resulted from the survey where possible. Each sector identified the following research priorities.

Health
- How do we build resilience (social, ecological, economic and governmental)?
- How do we reduce critical infrastructure dependencies?
- Mapping responsibility across sectors to understand points for collaboration.
- What are the expected health impacts due to changes in biodiversity?
- How can we prepare for socioeconomic shifts in the near- and longer-term future (2030's, 2050's)?
- How can health organizations better collaborate with and learn from Indigenous Peoples?
- What are the expected economic costs of building infrastructure and implementing interventions to protect health?
- How do the costs associated with adaptation vs mitigation compare, and should they be compared?
- What tools are available to support decision-makers from an economic perspective (regrets or cost-benefit analysis) ?
- Where do opportunities for building capacity already exist?
- How do we incorporate lessons from past experiences into policies and practice(narratives, case studies)?

Government
- How can we make adaptation and mitigation top priorities among many competing research priorities?
- What criteria do we have to determine the top priorities?
- How can we enhance our understanding of how climate change will impact mental health and social cohesion?
- How can we improve our readiness to respond to poor air quality issues?

Government Continued
- What do we need to learn about adapting built environments through preventative research?
- How can we identify windows of opportunity for policy development?
- How can we encourage the inclusion of an Adaptation and Health agenda in Canadian research journals?
- How can BC specific research be used to motivate the Ministry of Health in BC?
- Who should be driving this work?

Academic
- How can we better understand and respond to policy makers priorities?
- What are the synergies and trade-offs involved with adaptation and mitigation planning?
- How do you measure, monitor and track resilience?
- How do you evaluate whether an intervention to build resilience works?
- What are the core competencies for educational and career training?
- How can we meaningfully incorporate Traditional Ecological Knowledge?
- What does it mean to collaborate with Indigenous Peoples and communities in a culturally safe way?
- How can we identify and support climate-resilient development pathways?
- How can we best support rural communities?
- What tools are available to support decision-makers (Co-benefit analysis, social cost-benefit analysis) that should be deployed more widely in BC communities?

Inter-Sectoral Conversations

Participants then created three discussion groups with representatives from each sector in each group. There was very little structure given for this discussion as the priorities of each table were expected to be different and the intention was to provide an opportunity for open, cross-sectoral dialogue. If appropriate, participants were asked to consider how priorities across sectors intersected and what they needed to learn from each other to move forward. Discussions coalesced around the following themes.

Governance
The need for a centrally co-ordinated, provincial climate change and health response was clearly articulated by many participants. Strong provincial leadership was seen as essential for the collaborative, inter-sectoral work that will be required to effectively respond and adapt to a changing climate. The complexity of this issue will require new and different working relationships between and within sectors and agencies. These may require co-ordination and governance structures that fall outside the current health system. Planning and development of health and community infrastructure will be important elements of adaptation and have direct and indirect implications for health. While this currently often happens at the community level, provincial guidance and support would result in more equitable planning across communities and could potentially attract Federal support. Early actions include the proposed formation of a provincial working group.

Knowledge Generation and Dissemination Infrastructure
Sharing and generating knowledge, building workforce capacity and effective communication of scholarly evidence and practice-based learning were seen as key. Developing or supporting structures that can generate, house, disseminate and provide opportunities for the collaborative development of new knowledge, capacity and tools was identified as a priority. As part of recent directional planning, the BC Centre for Disease Control proposed to take provincial leadership in coordinating information sharing and knowledge transfer between agencies and enhancing provincial capacity for climate-related public health surveillance. However, the planning process is now on hold due to the COVID-19 response and the proposal has not been approved.

Working with Indigenous Peoples and communities
Current knowledge and operational structures do not adequately include diverse worldviews and approaches to health and wellness. Processes that engage Indigenous Peoples and communities in consultation and collaboration are still not well developed and will require careful consideration to become more culturally safe. The inclusion of Indigenous Peoples and communities in provincial planning and adaptation has the potential to improve the health and wellbeing of both Indigenous and non-Indigenous people in BC while building resilience to the impacts of climate change.

Creating Accountability
Articulating an economic rationale and building a business case for adaptation within a health framework (e.g. within health authorities) were seen as possible leverage points for funding and support. Understanding the costs of the health impacts of climate change might create a greater sense of urgency to act. Regular reporting mechanisms would also be required to track progress and establish public accountability.

Next Steps

Four key priorities for action were identified across sectors.

- o Identifying and creating provincial governance and leadership structures
- o Creating and supporting a provincial knowledge infrastructure
- o Working with Indigenous Peoples and communities
- o Creating accountability mechanisms

Understanding the health risks, costs and opportunities of climate change will require a concerted effort across sectors and provincial co-ordination. The need for provincial leadership was a clear priority identified during the dialogue. There was a strong and clearly stated desire for more collaboration across sectors. The absence of the Ministry of Health both at the event and in BC's climate change arena generally was noted. Health Authorities currently have little direction and virtually no Provincial funding to prepare and build capacity to address the impacts of climate change. Several ideas were considered to fill this leadership void including enlisting leadership from the provincial Public Health Executive Committee. Specific enabling language for the Ministry's 2019 mandate for *action against climate change* is needed to provide direction and support for the health authorities to carry out the mandate.

Health Canada awarded two $300K grants for climate change adaptation in 2019. Two individuals have been hired to begin this work; however, these funds will soon be exhausted, serving only three of the provinces seven health authorities, and will not be enough to meet the needs of the entire Province. In 2016, Indigenous Services Canada awarded $4M for community-led climate change and health adaptation research projects in BC First Nations. One provincial Climate Change & Health Specialist has been hired to develop and manage this Indigenous Climate Health Action Program. The funding is again short-term and project focused, leaving the majority of BC's 200 First Nations without climate health support. Strong provincial leadership with funding support is essential for the collaborative, inter-sectoral work that will be required to effectively respond and adapt to the challenges ahead.

At the close of the event, participants were invited to join the BC Climate and Health Network by signing up at https://shiftcollaborative.ca/climate-health/. This platform will enable those involved in the work of health and climate change adaptation to remain connected and foster provincial collaboration. As part of the BC Climate and Health Network, Shift Collaborative is planning a series of online climate and health dialogue sessions in the spring and summer of 2020. The series is intended to build on connections made through the Making the Links conference in 2018, as well as the potential for action highlighted by the 2019 BC Preliminary Strategic Climate Risk Assessment and this summary report. Planning for the series has been affected by the current COVID-19 health emergency however, and dates for the webinars are pending as of this writing. Please visit https://shiftcollaborative.ca/climate-health/ for updates.

This dialogue and summary report are intended to begin a provincial conversation about climate change and health in BC that will lead to actions to protect the health and well being of its people, places and environments. There are clear and immediate priorities for action that were identified here and a collective desire to contribute to positive and meaningful change.