



Garibaldi Lake, British Columbia

Building Hope Through Climate Change Action: BC Case Studies Report

PHAC Western Region & BC Centre for Disease Control
June 2023

About this Report

On November 7th, 2022, the Public Health Agency of Canada (PHAC) and the BC Centre for Disease Control (BCCDC) co-hosted a virtual [Roundtable on Climate Change and Health](#) with Dr. Theresa Tam, Chief Public Health Officer of Canada.

The event was grounded in welcoming remarks by Knowledge Keeper Shane Pointe (Sulksun). Sulksun asked participants to open our hearts and our minds, and to lift the hearts and minds of all Canadians to respect Mother Earth as the original stewards of the land and the ecosystem did, wrapping the conversation that followed in the theme of 'We Are One'. Dr.

Tam reviewed highlights of her most recent annual report, "[Mobilizing Public Health Action on Climate Change in Canada](#)",

followed by the presentation of three local case studies of intersectoral climate action that sparked a rich and inspiring conversation by all attendees.



An interwoven theme in the roundtable conversation was about the role of public health in addressing climate change. The impetus for this compilation is to extend on that theme - to highlight more local climate change case studies and in doing so illustrate the diverse ways and scales that public health can participate in actions around climate change.

In the case studies that follow, some of the actions have been initiated by public health in response to the needs expressed in the community while others were initiated and led by communities themselves through support provided by public health. There are also examples of work at a higher scale than a single community or region, illustrating the necessity to learn across communities, regions and species and use a variety of different knowledges. The final case study is one that celebrates the extraordinary successes of a community in addressing their climate change needs. This case study serves as a lesson for public health about the local-level strength and resilience of communities that can be gained through proactive utilization of Indigenous assets, knowledge and wisdom.

Many more communities in BC have experienced first hand the effects of climate change on their lives and there are many more case studies that can be shared, need to be shared and, we hope, will be shared. Sharing these stories, successes and lessons are one of the best tools we have to help each other understand the climate change impacts and to find ways to support action. We would like to thank all of the colleagues, partners and communities who have shared these stories with us. We feel humbled by the courageous, innovative, long and hard work that they do and we hope that the circle of sharing continues in ways that inspires and encourages others to mobilize their own actions to address climate change and to build resilient, sustainable communities.

We hope this collection gives a glimpse to how both small scale and big-scale actions can facilitate transformative change through collective action, if, in the words of Maya Gislason, they engage our heads, hearts and hands.

PHAC-BCCDC Project Team

Welcome Remarks

Weytk (Hello)

Andrea Boyce Ren Skwest (Hello, my name is Andrea Boyce)! I am a woman, a mother, and a daughter from the community of Ts'qescen te Secwepemc, known to settlers as the Canim Lake Band and located in the Northern Secwepemc in the Interior Health Region. I am also an Educator for the Chee Mamuk Indigenous Program with the BC Centre for Disease Control.

I am the child of two Indian Day school survivors, grandchild of three residential school survivors, my families have three generations of 60's scoop survivors. I am the first of six generations not to have to attend a day school, Indian residential school and not to be abducted by the Child Welfare System. My roots are of the land of my people, I have healed by the ancestral knowledge of being on the land of my ancestors, learning where I belong and gaining strength in identity.

As the case studies highlighted in this report show, climate change touches Indigenous and all communities on a daily basis and is inextricably linked to our well-being and health. Our relationship with land and waters is central to our Indigenous ways of knowing and being and runs across numerous dimensions of daily life, from transportation, to food security, economics, and sharing of traditional knowledge, education and learning.

Sharing stories and experiences, including about addressing climate change and building resilience, are core to Indigenous ways of knowing and being. They create hope, belonging, meaning and purpose that nourish strength and offer healing. They build knowledge and connections with the Earth Mother that is so critical to learn from in this time of ecosystem devastation.

Andrea and the Chee Mamuk team, BCCDC

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Heat Check-In Supports Project

**Sponsor: Healthy Environments & Climate Change,
Vancouver Coastal Health**

This heat preparedness and response initiative, and other tools to build community resiliency, responds to the tragic events of the 2021 heat dome and the increasing impact of climate change on our communities. As both heat events and climate change do not affect all populations equally, this work is grounded in engagement with non-governmental organizations who work closely with and are trusted by community members most at risk to climate-related impacts.

The Issue

In 2019, Vancouver Coastal Health joined forces with Fraser Health to complete a HealthADAPT-funded Climate Change and Health Vulnerability and Capacity Assessment. Through the process, we engaged with community partners who asked for support with heat preparedness and response. After the 2021 heat dome, like many teams across British Columbia, we sought interventions to improve health outcomes in future heat events.

Heat wellness checks were identified as a promising intervention used by other cities in North America to reduce deaths during heat events. We also knew that social connections are vital to reducing risk during extreme heat events. Preliminary results from the BCCDC and the June 2022 release of the [B.C. Coroners'](#)

[Report](#) validated the need to help those who live alone, reporting that 98% of the heat-related deaths during the 2021 heat dome occurred indoors in a residence, and 56% of those died alone.

Combining this knowledge and our partners' request, we developed the **Heat Check-In Supports Project**, aiming to increase community checks on vulnerable people during heat events; support organizations to prepare for heat events by providing evidence-based heat resources; and distribute resources and training to empower non-healthcare staff, volunteers and public to conduct heat check-ins.

Heat check-ins include a visit, call, or text to a heat-vulnerable person during a heat event. Check-ins allow staff or volunteers to assess the heat-related safety of someone's home environment, determine if they are showing signs of heat stress, and whether they need help.

56% of deaths during the 2021 heat dome occurred alone.

How we did it

Given this project needed to be completed before the start of the heat season, the project planning, engagement, and resource development was executed over 10 weeks, with a full-time project coordinator.

The coordinator conducted a literature review, scanned existing materials, and engaged with partners to determine their interest, capacity, and needs in order to conduct heat check-ins. As our team with VCH does not have capacity to conduct calls ourselves, partnerships were essential to understand who across community and health systems had capacity to conduct

checks. Looking for connection points with people more vulnerable to heat-related illness (e.g. older adults, people with chronic illness and / or physical impairment, people who are materially or socially deprived), we met with municipal partners, as well as non-governmental organizations (NGOs) who serve these populations.

Through the interview process, partners identified that they needed more information on how to *run* heat check-ins and train staff and volunteers who may assist with check-ins. Knowing that the National Collaborating Centre for Environmental Health was developing a guide on how to conduct checks, we focused on providing operational resources. We recognized that heat check-ins might occur in a variety of settings and by staff or volunteers with diverse training. The target audience for our framework is NGOs, which have a variety of capacities. The framework is created so organizations can select the most relevant information and develop their own heat check-in procedures that meet their specific context.

Partnerships

Partners included:

- ✓ Connections to NGOs and opportunities for heat response collaboration and coordination.
- ✓ Non-government organizations that serve heat-vulnerable populations in the community (e.g. BC Housing, BC Association of Neighbourhood Houses, United Way, Hey Neighbour Collective)
- ✓ Fraser Health Authority – joint training session to NGO's to discuss extreme heat education and supports during heat events.
- ✓ Other VCH departments – contacts, expert review, collaboration on educational events and coordination for broader heat event notification

Impact and Lessons Learned

The inter-sectoral partnerships developed for the *Heat Check-In Support Project* continue to be beneficial for other heat and climate-related work.

The implementation of this heat preparedness initiative resulted in positive community impacts, and many valuable lessons to consider for future projects.

The extreme heat tools that were developed led to over 1000 heat wellness check calls being conducted within the City of Vancouver during the 2022 heat season.

Community organizations reported that heat wellness checks often addressed more than heat-related illness, such as climate-related anxiety and social isolation.

The team identified that a longer timeline would have allowed for more engagement with people receiving checks and more rural or isolated populations.

Small meetings with organizational staff were faster to coordinate than meeting with larger focus groups or an organization's clients.

Working alongside community allowed for information to be shared through new channels, in different formats and for the team to provide direct organizational support during extreme heat events. The team is also grateful for expertise shared by NGO partners who work in community and are conducting checks. This improved the reach of health messaging and fostered collaborative relationships that will be beneficial for other climate resiliency work.

There is currently engagement fatigue and very low capacity within non-governmental

organizations. It is important to recognize that organizations are frustrated with the granting model, seeing reports without action, and may perceive downloading of services from health authorities to community.

Currently in BC, only local governments are eligible for emergency response funding from the province. A handful of local governments are setting up agreements to then fund NGOs with that provincial funding but overall NGOs do not receive any additional funding for heat planning or response. NGOs are vital partners for emergency response and are often the only trusted channels to vulnerable populations. Their work needs to be consistently funded and their teams integrated into the broader emergency response system.

Next Steps

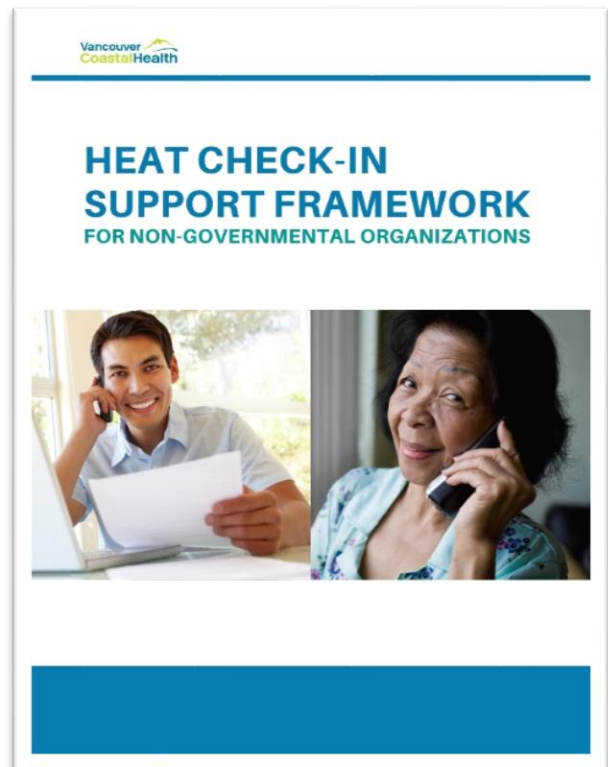
Continue advocating up and across for financial or structural ways to support NGOs to participate in both heat check-ins and extreme weather response.

Heat check-ins are expected to increase in 2023, as engagement is expanded across sectors, British Columbia and the rest of Canada.

Use the engagement and relationships built through the project to engage with populations most vulnerable to climate-related extreme weather events to better understand their needs as the climate changes.

Continue to foster relationships with local governments and NGOs to improve emergency coordination and collaboration.

Given the low capacity, NGOs have provided feedback that templates need to accompany resources like the Heat Check-In Support Framework. For 2023, the team is releasing a heat check-in script, heat check-in train-the-trainer package with videos and is continuing to offer heat check-in training sessions.



Where to Find Us

healthy.environments@vch.ca

www.vch.ca/heat

Advancing Climate-Resilient Housing Policy

Sponsor: Vancouver Coastal Health, Healthy Environments & Climate Change team and Healthy Public Policy Unit

Due to climate change, increased protection is needed against health impacts of extreme heat. Public health practitioners are finding new and exciting ways to support innovative policies in the residential building sector.

The Issue

Staff from Vancouver Coastal Health have been working with partners at various scales to understand the technical options and policy context related to thermal safety and climate resilience in residential buildings. The team has also been contributing to innovative policy development and implementation in this area, and with the [“Right to Cool”](#) in general. This work relies on new working relationships, funding commitments, and policy creation for the Vancouver Coastal Health Authority.

Several current policies and bylaws focus on requirements for cooling and filtration in new buildings. However, much more work is needed to address cooling and filtration in existing buildings. There are a variety of potential policy approaches, and Vancouver Coastal Health is working with Metro Vancouver, the City of North Vancouver, the City of Vancouver, and others to explore the opportunities and limitations of various options to enable cooling

and reduce wildfire smoke exposure for people in the future.

A resilient home is one that can resist, recover and adapt to adverse conditions of climate change or natural disasters.

How we did it

The methods involved in this advocacy work are varied. First, VCH staff conducted a jurisdictional scan involving key informant interviews from a variety of sectors and in varying settings. This report represents a foundational knowledge product, and has been shared with partners across the region, and complements similar scans undertaken by partners.

VCH staff then convened a community of practice where those working on this issue in the region could exchange ideas and help shape research and policy priorities. This activity led to the development of a scope of work that consultants will use to research passive and active design strategies for thermal safety in existing multi-unit residential buildings, as well as accompanying policy recommendations. This policy development will involve best practice review, co-production of new policies, and engagement with decision-makers, building owners and operators, and tenants.

Partnerships

These intersectoral partnerships incorporated multiple dimensions of the policy landscape and were key drivers of success.

- ✓ City of North Vancouver
- ✓ Metro Vancouver
- ✓ City of Vancouver
- ✓ BC Housing
- ✓ BC Centre for Disease Control



Photo credit: Meghan Straight, Vancouver Coastal Health

Impact and Lessons Learned

Although only an implied indicator of impact, the assembly of project funds and the issuing of a Request for Proposals by City of North Vancouver, Metro Vancouver, and Vancouver Coastal Health represents an important achievement and reflects that this work is a priority in the region. This work will influence decisions and policy at multiple scales, from individual buildings to conversations about provincial and national building codes and standards. This work is already leading to a better understanding of the design options and policy approaches for various building types and how public health practitioners can intervene in this issue.

In the meantime, VCH continues to advocate for thermal safety in buildings. In 2022 this involved providing a letter of support for City of Vancouver building bylaw requiring cooling and filtration in Part 3 buildings starting in 2025. In 2023, this work continues with meetings with provincial Ministers and regulators to ensure that thermal safety in existing buildings stays top of mind.

Next Steps

By fall 2023, policy recommendations resulting from the funded project will begin to be shared with partners across the region. At this point, advocacy and additional support will be essential as decisions get made about how to provide housing that is safe, affordable, and healthy for years to come.

Where to Find Us

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Connect & Prepare Program

Sponsor: Building Resilient Neighbourhoods and Hey Neighbour Collective

This program brings groups of neighbours together to meet each other and learn about resilience to acute emergencies and long-term, chronic stressors through “Connect & Prepare” workshops. The neighbours identify their shared assets and vulnerabilities, and then collaborate in launching practical projects to strengthen what – and who – is in their emergency toolkit.

The Issue

It’s long been recognized that social networks are key aspects of emergency preparedness and resilience—yet traditional emergency preparedness educational programs do not focus on developing social connections. Connect & Prepare was originally piloted in 2018 through a partnership between Building Resilient Neighbourhoods (BRN) and VictoriaReady, the City of Victoria’s Emergency Management division, to help neighbours become more connected and prepared for everyday stressors and large-scale emergencies. Since that time, BRN has continued to develop and implement the program and has begun to scale it to other communities.

Building stronger connections between neighbours helps people better prepare for, respond to, and recover from many types of challenges, including climate emergencies that can involve anything from short power outages

or transportation-system disruptions to prolonged extreme heat, floods, or wildfire smoke. When any emergency strikes, neighbours are the nearest people who can give immediate assistance to each other. Knowing and being able to trust one’s neighbours has been shown to support and strengthen resiliency. Even outside of emergency situations, connectedness can mitigate against mental/emotional distress and isolation, and support health-promoting behaviours.

Victoria’s Connect & Prepare pilot program included three multi-unit housing sites and resulted in 94% of participants getting to know their neighbours better and 100% taking action to be better prepared for emergencies—such as buying emergency supplies together or developing buddy check-in systems. Some participants saw the effects of the program almost immediately, and these new skills and relationships served them well during the COVID-19 pandemic, since they had already developed virtual group communication systems for connecting with and supporting each other.

It’s not just about what is in your emergency kit, but also who is in it.

~ Building Resilient Neighborhoods

How we did it

Connect & Prepare is very accessible and designed to be completed by neighbours who live on the same street or in a multi-unit building. Three workshops engage residents through interactive presentations, games and discussions. Led by a trained facilitator

(sometimes accompanied by a local-government emergency preparedness expert), neighbours meet each other and identify some of their individual and collective assets and challenges related to chronic daily stresses, acute emergencies and social connectedness. Together, neighbours home in on their shared priorities, form action plans and launch resiliency projects. One group, for example, developed both a buddy network and a food distribution system to help those with disabilities living on fixed incomes.



Connect & Prepare Program Roadmap

Partnerships

BRN is now a partner in the Hey Neighbour Collective (HNC), a Vancouver-based collective impact project that brings together housing providers, community non-profits, researchers, local and regional governments, neighbourhood associations, and others to share learnings and test ways of building social connectedness and resilience in multi-unit housing. A number of

public health experts and healthy-city specialists are advisors, and Vancouver Coastal Health has long been an active partner and learning network participant.

Through HNC, Building Resilient Neighbourhoods is currently partnering with municipal governments, neighbourhood associations, and community-based organizations to scale the Connect & Prepare program to three new locations: North Vancouver, New Westminster, and the Mount Pleasant neighbourhood in Vancouver. BRN is providing the local delivery partners with training and Connect & Prepare curriculum materials, including new supplemental how-to guides and links to resource materials specifically addressing issues such as welcoming difference and disability, creating communication systems for mutual aid, and preparing together for extreme heat. In some cases, the delivery partners are intentionally engaging buildings with high proportions of people who are lower income, older, or with a disability — demographics known to be more affected by chronic stresses, emergencies and social isolation.

Impact and Lessons Learned

Program surveys have consistently found that most residents who complete all three of the Connect & Prepare workshops report being better prepared for emergencies and more socially connected with neighbours. Long after the workshops have ended, some participants have reported enhanced neighbourly connections and long-term resilience in relation to other daily stressors such as safety or food security.

As a result of implementing Connect & Prepare or other neighbour-engagement activities led by

Hey Neighbour Collective partners, housing operators have reported improved relations with and between residents, better caretaking of buildings, and market advantage. Municipal governments, emergency management staff, and community non-profits have also reported benefiting from expanded outreach services to residents and fewer demands on services from neighbours engaged in mutual aid.

Neighbour-groups have consistently highlighted that having trained facilitators guiding them through Connect & Prepare has been invaluable, and so BRN is currently testing new delivery methods and developing ways to reach more residents and neighbourhoods. Working more intensively with groups with specific needs, such as seniors and people with disabilities, Connect & Prepare facilitators are developing innovative accessibility adaptations for program delivery. BRN is also currently nurturing a Community of Practice for resident-leaders to encourage, educate, and support each other in ongoing ways.

Where to Find Us

BUILDING RESILIENT NEIGHBOURHOODS:

info@resilientneighbourhoods.ca

Building Resilient Neighbourhoods' Connect & Prepare Program:

<https://www.resilientneighbourhoods.ca/connect-prepare/>

HEY NEIGHBOUR COLLECTIVE:

<https://www.heyneighbourcollective.ca/>

Hey Neighbour Collective practice guides featuring Connect & Prepare and other social-resilience activities

<https://www.heyneighbourcollective.ca/guides/practice-guides/>

Who is in your emergency kit?

<https://www.heyneighbourcollective.ca/2021/06/who-is-in-your-emergency-kit/>

HNC Video: Building resilience and emergency preparedness through social connections

<https://www.heyneighbourcollective.ca/2023/02/building-resilience-and-emergency-preparedness-through-social-connections-video/>

How does social connectedness between neighbours support health and well-being? (*evidence backgrounder*):

<https://www.heyneighbourcollective.ca/wp-content/uploads/2022/06/HNC-Evidence-Backgrounder-01.pdf>



We All Take Care of the Harvest

First Nations Health Authority & BCCDC

We All Take Care of the Harvest (WATCH) is a pilot project that addresses seafood safety, security and sovereignty in the context of climate change. WATCH aims to: 1) Help communities access timely safety information about seafoods and harvest areas; 2) Enhance the ability of communities to plan for and manage climate impacts that affect seafoods; and 3) Promote seafood security and sovereignty for coastal First Nations.

The Issue

WATCH was created in 2020 with funding support from PHAC and Health Canada, in response to concerns raised by First Nation communities and others at a seafood safety workshop held in 2016.

The 2016 workshop was co-hosted by FNHA, the BCCDC, and the BC government in response to a long-lasting bloom of harmful phytoplankton (or algae) that appeared off the coast of BC and reached a peak in 2015.

The phytoplankton produced a neurotoxin that causes Amnesic Shellfish Poisoning (ASP) which accumulated in shellfish (e.g., clams, crabs) and forage fishes such as anchovies and sardines, and made its way through the food web into marine mammals and birds. At the time, much of the West Coast was closed to shellfish harvesting.

At the workshop, First Nations community members spoke about several concerns. The most critical of these was the need to know when and if shellfish were safe to harvest.

What We Do

The WATCH pilot project began with a Project Team comprised of FNHA, BCCDC and 4 First Nation communities: Tseshaht First Nation, Klahoose First Nation, Malahat Nation, and Metlakatla First Nation which was later replaced by Gitga'at Nation. It has since grown to include eight WATCH monitoring communities, and there are approximately 100 members in an ever-expanding WATCH network.

WATCH helps communities develop monitoring programs, initially focused on tracking harmful algal blooms to alert harvesters and health care providers. Together with specialized consultants, FNHA provides training and equipment, such as microscopes and plankton nets, so they can see when harmful plankton are in the water and warn harvesters that clams, crabs, and other shellfish might contain toxins. Communities also monitor salinity, temperature, and other variables to better understand harmful algal blooms and changing ocean conditions. Their data and maps will provide important baselines and facilitate trend and predictive analysis, thereby contributing to adaptation planning.

WATCH adaptation planning includes several other components that will be incorporated into risk management and adaptation planning resources for coastal communities. Literature reviews and dietary and harvest studies in pilot communities are examining exposures, sensitivities, and adaptive capacities. These help to identify populations and individuals most at risk from climate-related conditions and hazards affecting seafood safety and security.

With emerging literature and discussions with experts, WATCH is also assembling information on exposures, sensitivities, and adaptive capacities of seafood species of importance to

First Nations in BC. Many of these species have multiple life stages that must endure layered and interacting climate-related hazards, such as heat domes and marine heat waves, runoff from atmospheric rivers, and ocean acidification.

Most importantly, WATCH gathers people together in culturally safe settings and with a spirit of shared learning to explore the seafood and climate-related health challenges that First Nations are experiencing now, what they might anticipate in the future, and how these can be addressed to promote the well-being of communities and marine life.

“It can be really hard to change an elder’s technique that has been used over generations. To say, Aunty, I know this is how we used to do it, but the water is warmer and there are new things in there and we have got to watch out.”

~Qwustenuxun Williams, WATCH

Partnerships

WATCH is a project of FNHA’s Environmental Public Health Services in partnership with participating communities, BC Centre for Disease Control (BCCDC), Vancouver Island University (VIU), Island Marine Aquatic Working Group (IMAWG), and U.S. shellfish and phytoplankton experts. Grant funding has been generously provided by Health Canada HealthAdapt program, Public Health Agency of Canada Infectious Disease and Climate Change Fund, and Indigenous Services Canada Climate Health Action Program. Two FNHA programs (Indigenous Climate Health Action Program (ICHAP) and Environmental Contaminants Program (ECP) have augmented project budgets, graciously administered by external

partners (Malahat Nation and IMAWG, respectively). In-kind support has come from many sources; most recently, a UBC student team studied biotoxin closures and climate trends with the help of several scientists in the WATCH network.

WATCH is guided by a First Nation Advisory Team, External Advisory Team, Monitoring Community of Practice, and broader WATCH Community of Practice.

As a founding partner, the BCCDC has played an essential role in the evolution of WATCH. It has supported FNHA by assisting with writing funding proposals, conducting literature reviews, and sharing decades of experience in navigating shellfish-related illnesses. Taking the lead from First Nations communities, the BCCDC provided and helped interpret essential marine biotoxin and sea surface temperature data, improved BCCDC shellfish harvest real-time mapping services and summarized gaps and barriers for shellfish programs.

Another generous partner, VIU has co-hosted WATCH events at its Deep Bay Marine Field Station and continues to work with regulatory bodies, First Nations communities and many others to advance the aims it shares with WATCH. The Centre for Shellfish Research and Centre for Seafood Innovation have expanded the WATCH network with new academic and community connections.

“WATCH assists First Nations to better understand the risks that climate change has brought to traditional food sources and empowers Nations to make informed decisions on their own health...”

~Dr. Timothy Green and Carl Butterworth, VIU Centre for Shellfish Research

Impact and Lessons Learned

Climate change is happening right now and is having notable, tangible impacts on individuals and communities. Recognizing the urgent need for preparedness, WATCH is simultaneously planning, monitoring, expanding collaborative networks, creating opportunities for learning and sharing, and working towards systemic, adaptive changes. Improving access to biotoxin testing for First Nations harvesters is an important step. Another is ensuring monitoring and testing locations reflect community needs and concerns, Indigenous knowledges, and the best available health and environmental science.

FNHA WATCH actively listens to and prioritizes the issues important to participating communities. First Nations tie emerging concerns to cumulative and compounding health and environmental impacts from historic and ongoing colonial practices. Communities also strive for strength-based approaches, such as providing opportunities for intergenerational knowledge-sharing, and expanding learning and monitoring into new areas of interest. For example, communities are concerned about local outbreaks of *Vibrio* bacteria and norovirus from eating seafoods and want to learn how to prevent these. Microplastics in waters and foods, the health of intertidal species, and invasive European Green Crabs are just some of the many topics of interest to monitors.

“The ability to harvest is really tied into the transfer of knowledge. And some of that knowledge is only transferred through the practice but it also brings people together.... Elders especially are not going to share harvest knowledge when they can’t even harvest or out of the context of harvesting. So it represents massive losses of traditional knowledge...”

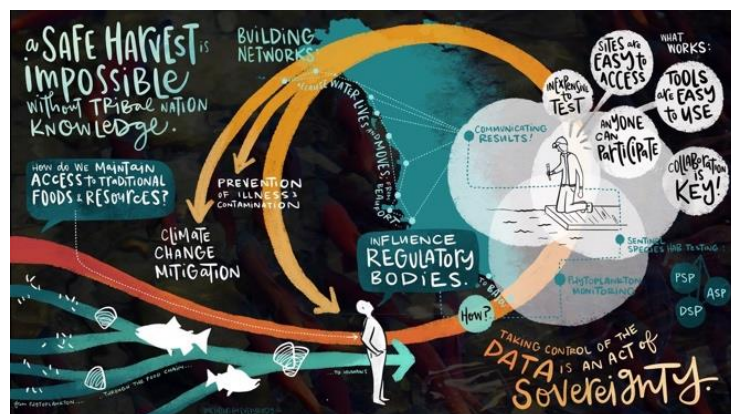
~Andrew Sheriff, WATCH Community Lead, Malahat Nation, Project Team meeting, 2022

WATCH events, such as annual Gatherings and One Health-style seasonal reflections (coming this year), bring together sectors and disciplines that rarely meet, such as health, fisheries, culinary services, and emergency management. This is fostering innovative and nuanced thinking, as well as special relationships and new initiatives.

Coastal climate health requires attention to the health of complex interconnected marine, freshwater aquatic, and terrestrial ecosystems and species together with the human communities who care for and rely on them. As WATCH strives to better understand and respond to climate impacts to coastal health, it is learning with a diverse network, creating and refining tools, strengthening connections to waters and lands and traditional seafoods. A stable funding model extending beyond the end of the pilot project in March 2024 is urgently needed to carry on this important work.

Where to Find Us

For more information, see <https://www.fnha.ca/what-we-do/environmental-health/watch-project>
To join the WATCH network, please contact: watch-project@fnha.ca



Corrina Keeling, LoveLetterForEverybody, WATCH Gathering: Imagine... A safe and secure seafood system for coastal first nations, November 2, 2022.

Ticks and Climate Change 3-West (TCC-3W)

Sponsor: BC Centre for Disease Control

The TCC-3W project takes a One Health approach to improve the evidence base and response capacity to address the impacts of climate change on tick-borne diseases in Alberta, British Columbia, and Saskatchewan.

The Issue

As climate change is altering ecosystems around the world there are increased risks that ticks may become more abundant or migrate into new regions and carry pathogens along with them that negatively impact humans, domestic animals, and wildlife.

The primary goals of the TCC-3W project are to: 1) improve surveillance of ticks and tick-borne diseases; 2) develop data models to explore the potential impact of climate on tick distribution and abundance and the occurrence of tick borne diseases; and 3) to enhance communication and collaboration across disciplines, agencies, and stakeholders in Alberta, British Columbia, and Saskatchewan.

How we did it

Project partners in all provinces took part in active sentinel tick surveillance through the Canadian Lyme Disease Research Network (CLyDRN) in addition to their existing active surveillance. Each province also joined [eTick](#) to enhance passive surveillance. eTick is a free

online public platform for image-based identification and population monitoring of ticks in Canada ([etick.ca](#)). Tick surveillance and pathogen testing data were also collected from various local, provincial and federal organizations in order to analyze, monitor and predict changes in tick habitat, distribution and pathogen changes.

By strengthening our capacity to detect ticks and tick-borne pathogens and forecasting their expanded range due to climate change and disseminating this information, we enabled at-risk populations, health care providers, livestock producers, and wildlife biologists to take action. These actions in turn benefit the physical, social and mental health of all involved by mitigating the impacts of ticks and their associated pathogens.

The health benefits of this project not only covered potential human health impacts but also impacts on companion animals, livestock and wildlife.

Partnerships

By taking a One Health approach the project has built strong multi-sectoral partnerships that include collaborators from regional organizations, academia, research organizations, wildlife health programs, and local/provincial/federal government bodies. The project has not only increased the connections between the provinces and their stakeholders but also amongst the three western provinces.

New collaborations have also flourished due to these new connections resulting in new initiatives to address vector-borne diseases in the context of climate change. Along the way, the TCC-3W has also joined forces with the

Washington State Department of Health with plans to broaden its scope to include Utah and Montana. These collaborations have and will increase information sharing, response capacity and planning across our shared borders.

Impact and Lessons Learned

Overall, the project has been a great success. The TCC-3W has directly or indirectly increased both the active and passive surveillance activities in all three provinces. All three provinces have joined the [eTick](#) passive photographic surveillance program, now available in all Canadian provinces. TCC-3W provinces are also taking part in active tick and tick-borne surveillance including CLyDRN. Using current and historical data, modelling maps have been developed predicting the current and future habitat of various tick species under future climate change scenarios.

A number of success factors for one health collaboration have been employed such as:

- 1) Building a strong, engaged leadership team;
- 2) Clearly defining roles and responsibilities that are co-developed with project partners and collaborators;
- 3) Developing/strengthening effective structures for collaboration, information exchange, data and resource sharing; and
- 4) Creating an enabling environment that promotes trust, transparency, and accountability.

Some of the challenges faced by the TCC-3W project included the COVID-19 pandemic, which restricted the ability to perform active surveillance, prevented in-person meetings, and secondments of project team members. These

were a necessary reality, but the resiliency of the team allowed for an internal rearrangement for the project to move forward.

One of the biggest lessons learned is that there is a lack of historical surveillance data when it comes to ticks and an even smaller amount of tick pathogen data allowing for the mapping and modelling of tick-borne pathogens under future climate scenarios. In order for this obstacle to be overcome more ticks need to be submitted and tested for pathogens of concern. To achieve this increased awareness among members of the public and health professionals of ticks and the importance of targeted tick surveillance is needed.

Where to Find Us

For more information please visit the website at: <http://www.bccdc.ca/our-services/programs/tick-borne-diseases-and-climate-change>

You can also contact us at:

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Cool Playgrounds

Sponsor: BC Cancer

Playgrounds are getting cooler, literally and figuratively! Cool Playgrounds is a BC Cancer research project to prevent skin cancer. This project has shown that playground shade offers a 50% reduction in ultraviolet radiation exposure among preschoolers and the benefit of shade extends beyond skin cancer prevention and offers environmental and social benefits.

The issue

BC Cancer has several research studies underway to assess the impact of shade on preschool-age children's exposure to ultraviolet radiation (UVR), thermal comfort and associated play behaviours.

“Sun exposure is the most important cause of skin cancer.”

~Dr. Cheryl Peters, Cancer Prevention Scientist at BC Cancer & BC Centre for Disease Control.

Shade plays a vital role in making cancer prevention a built-in part of the spaces we move through in our daily lives. There are many environmental co-benefits of shade, such as mitigating the urban heat island effect, reducing energy costs, and reducing greenhouse gas and air pollutants. With temperatures rising and extreme heat events becoming more common, the need for cooler playground settings that allow children to spend more time playing

outdoors in sun safe and heat resilient spaces is imperative.

How we did it

BC Cancer worked in partnership with the City of Vancouver and Kitsilano Neighbourhood House on a six-month long study that involved the installation of three removable shade sails at a Vancouver childcare centre. The project team collected UVR and physical activity measurements from children during outdoor play over a total of four days—two days with shade sails installed and two days with shade sails removed over three different seasons – spring, summer and fall.

As part of separate research study, BC Cancer partnered with UBC's Play Outside Lab led by Dr. Mariana Brussoni and UBC School of Architecture and Landscape Architecture on a component of a large research study to promote outdoor play in YMCA early learning centres in the Lower Mainland. One component of this project intervention involved outdoor modifications to enhance shade and offer more natural and loose parts play features. A mix of sun safety interventions were applied to 5 of the 8 daycare centres to provide children with extra sun protection while they play outdoors. The addition of human-built shade sails and canopies, and natural elements, such as trees, shrubs and tall grasses, are just a few examples of what was created. Data analysis on children's play behaviours is ongoing.

Partnerships

BC Cancer worked in partnership with the City of Vancouver, Kitsilano Neighbourhood House, UBC's Play Outside Lab, the YMCA and UBC's

School of Architecture and Landscape Architecture to bring both these research projects to life. Continued work to promote and advance equitable shade access in playgrounds and parks throughout BC is being done in partnership with the BC Centre for Disease Control, regional health authority and municipal partners, and members of Sun Safe BC, a provincial network of members dedicated to reducing UV exposure among British Columbians.

Impact and Lessons Learned

The study done in partnership with the City of Vancouver and Kits Neighbourhood House found that the presence of shade sails significantly reduced UVR exposure among children in outdoor play areas by 50%. Notably, the playground was located on the second floor, facing southwest with no nearby high buildings to provide shade, leaving children especially vulnerable to high levels of sun exposure. As a result of these findings, the City of Vancouver made changes to their Childcare Technical Design Guidelines to ensure that any new build require hooks along outdoor perimeter fencing to allow for easy installation of shade sails. Further, the City of Vancouver is currently updating their Childcare Design Guidelines with new thought and care being put into decisions around shade and sunlight access at childcare centres.

“Children are particularly vulnerable to the harmful effects of UV radiation.”

~ Breann Corcoran

BC Cancer’s health promotion team has formed a new provincial policy working group to boost

the amount of shade offered in childcare centres, schools and playgrounds. This group includes representation from BC Cancer, BC Centre for Disease Control, and local health authority partners. The hope is that such shade structures become the norm in play areas across the province. Increasing the amount of shade in our cities can also have the dual benefit of reducing the urban heat island effect and promoting cooler and more comfortable settings for children to play in.

As a follow-up to these studies, BC Cancer will be collecting observational and interview data this summer on another shade intervention taking place at a local childcare centre in Vancouver. The research team will be collecting observations of children’s outdoor play and activity intensity. Additionally, focus groups with Early Childcare Educators and Administrators will shed light on how playground shade affects children’s play, sun safety and overall thermal comfort, as well as the feasibility of designing and installing shade features in childcare centres.

Where to Find Us

For more information about these projects, please contact Breann Corcoran at breann.corcoran@bccancer.bc.ca.



An outdoor play space at one of the sites with a shade sail strategically located over a high-traffic area (left: before transformation, right: after transformation).

Photo Credit: UBC School of Architecture and Landscape Architecture.

Climate Change Adaptation Initiatives in the City of Burnaby

Sponsor: Fraser Health Authority

The purpose of this initiative is to: create awareness of how climate change affects health and well-being; reduce health risks related to climate change, as well as reduce barriers to using municipal facilities for cooling; and create direct connections with organizations supporting marginalized seniors and those new to the community.

The Issue

During extreme weather events some seniors and other vulnerable populations may need help to identify:

- How extreme heat can affect their health and why;
- What they can do to stay safe;
- The signs of heat illness to watch for; and
- Ways that family and care partners can support those who are most affected by extreme weather.

Fraser Health Authority identified the need to support local governments and community organizations that are assisting marginalized populations, with climate change adaptation, via extreme weather preparedness and communication.

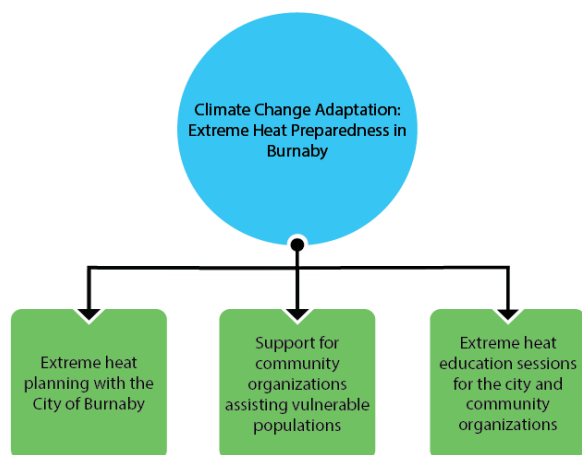
How we did it

Prior to the 2022 heat season, Fraser Health Authority supported the City of Burnaby with city-wide planning. As part of their strategy, the City of Burnaby held a public forum in the pre-season to familiarize the public with information and locations of cooling centres. Locations of cooling shelters were partly based on climate vulnerability maps created by Fraser Health Authority and Vancouver Coastal Health Authority through the HealthADAPT Project.

Fraser Health Authority provided extreme heat presentations and education sessions for the City of Burnaby and was invited to provide that information to other organizations, such as Immigrant Services Society of British Columbia, AgeCare, and Voices of Burnaby Seniors. These sessions provided accessible health information, as well as opportunities for staff to hear the needs and concerns of community members. This resulted in the development and dissemination of multi-lingual resources which further supported knowledge translation to affected populations and support organizations.

Through these connections Fraser Health Authority staff were able to provide information sheets on care for seniors, those with pre-existing conditions, what landlords or stratas can do to support their tenants, and other focused information documents related to extreme weather preparedness.

A suggestion from the City of Burnaby led to the development of wallet cards/bag cards that were shared with the BC Pharmacy Association so that Pharmacists could provide information easily to patients who might be at risk due to extreme heat.



Collaborative climate change adaptation activities undertaken as part of extreme heat preparedness in Burnaby (Fraser Health, 2023).

Partnerships

This project fostered close partnerships with the City of Burnaby, the BC Pharmacy Association, and Burnaby Primary Care Networks. The project also supported the Burnaby Society to End Homelessness in their planning; including explaining to both the society and the city how to communicate to the public why cooling stations or tents might be put up before the city opened cooling shelters.

Impact & Lessons Learned

Through the process of working with the City of Burnaby and community organizations, it was extremely helpful to have direct communication lines to be able to understand residents' concerns. For example, some community members shared uncertainties related to using fans during extreme heat and this provided us with an opportunity to answer any questions posed by residents and the City of Burnaby. This also helped to identify what resources needed to be created.

In addition, being engaged very early on in the process was helpful because it allowed for early identification of needs and gave adequate time for resources to be translated into several other languages. As mentioned earlier, the team

could also answer questions on emerging issues, such as proper fan use, and address any messages that might get misinterpreted. This was helpful in building relationships for ongoing partnerships and ensuring information went out in a timely manner and to the intended people.

As a whole, the team learned about the need to build capacity within the community, in order to effectively conduct community presentations and have the information shared regarding extreme weather reach the intended populations. In-person presentations worked well, and it highlighted that there may be future opportunities for more train-the-trainer events for knowledge translation with various community organizations.

Overall, one of the greatest lessons learned was around the power of building connections with the city and through that working with partners at different tables to connect to those we were most concerned about, which included seniors, individuals with low-income, and newcomers. In addition, one of the greatest impacts of this project was that vulnerable populations within the City of Burnaby were provided with the information and support needed to stay healthy during extreme weather events. Community partnerships and evidence-based health data were leveraged to ensure that those most in-need were provided with the resources and amenities to stay cool and safe during extreme heat events.

Where to Find Us

Healthy Built Environment Program, Fraser Health, healthybuiltenvironment@fraserhealth.ca
Sandra Gill, Regional Manager, Environmental Health Services, Fraser Health, Sandra.Gill@fraserhealth.ca
General resources on our Fraser Health website:

[Adaptation: preparing for current and future climate challenges - Fraser Health Authority:](https://www.fraserhealth.ca/health-topics-a-to-z/the-weather-and-your-health/adaptation-preparing-for-current-and-future-climate-challenges#.Y8sMGBfMKUk)
<https://www.fraserhealth.ca/health-topics-a-to-z/the-weather-and-your-health/adaptation-preparing-for-current-and-future-climate-challenges#.Y8sMGBfMKUk>

Building a Community Resiliency Plan to Shelter in Place during Extreme Weather Events

Sponsor: Kanaka Bar

Kanaka Bar has created proactive and community led initiatives to support climate change adaptation and resilience. Through restoration, renovation and rejuvenation of the land, their work offers examples of visionary leadership and community engaged responses to climate change in BC from an Indigenous perspective.

The Issue

Colonisation brought a new way of thinking and doing in Canada, one premised on oppression, hierarchy, individual success, exploitation, and extraction with little or no regard for environmental impact or future generations.

After 150 years of colonization and displacement, the Indigenous community of Kanaka Bar, located at the north end of B.C.'s Fraser Canyon, were seeing traditional animal and plant food sources being quickly depleted and their surrounding eco-system transitioning from a semi-coastal to a semi-arid climate. Stories told by elders about abundance on the Fraser Canyon's watersheds and mountains did not match the environmental changes being observed on the land. The adverse effects of colonization and trauma were gripping the region, and Chiefs and Council faced barriers to putting forward visions for a different future.

In 2021, Kanaka Bar experienced and survived four extreme weather events in one year: heat, wind, rain, and cold. What follows is a few examples of resiliency efforts this community undertook within the last 30 years so that it had the best chance to "shelter in place" during extreme weather and the catastrophes that follow.

How we did it

Awareness: Kanaka Bar's transition towards a resiliency mindset was inspired by Chief Dan George's "Lament for Confederation", a powerful broadcast in 1967 about Canada's first 100 years of colonial land and resource policy. This, along with the 1973 Supreme Court of Canada's Calder decision addressing Aboriginal rights and title, sparked awareness that Canada's First Nations had survived contact and were now re-positioned and able to participate in Canadian land and resource decision making.

Kanaka Bar's leadership and membership understood that a significant change was occurring and that they were being called to think and lead differently. Shortly after the 1976 closure of Lytton's residential school, Kanaka's leaders started looking for ways to give people their voices back, to engage in decisions that effect the community, to support each other's needs and to feel pride by going back to the land.

The Council began monthly meetings with community members to hear concerns and reported back regularly on successes and challenges in addressing these issues. They also shared a bi-annual written report to reflect on the last 6 months of effort and planning for the next 6 months. From 1978-1990, after 12 years

of active info-sharing, community engagement, and planting the seeds for positive change, mindsets shifted to *“if they can do it, why can't we”*.

Making *“getting back onto the land”* the primary priority, the community's first action was to apply for a water license in 1990 on Kwoiek Creek which became operational in 2014. Kanaka residents were very concerned that community-based watershed land and resource uses would not contribute to environmental harm and so the construction, operations and decommissioning plans for the hydro project were specifically designed to avoid or mitigate potential adverse impacts.

Codification: In 2015 Kanaka Bar summarized and codified all land and resource uses that had occurred within their traditional territory post-contact, and formally charted first steps towards healing the land and people with a vision statement *“to become a self-sufficient, sustainable and vibrant community”*. The resulting land use plan was based on another concept, *“what you do to the land, you do to yourself”*, and included inter-connected goals related to harm reduction, harm reversal, and watershed restoration.

To support watershed restoration and reclamation efforts, Kanaka leadership and members realized that old ways of knowing needed to be complimented by Western technology and science. They initiated a process of gathering site specific data using water gauges in seven surface streams, an air quality monitor for smoke and allergens, and invested in three weather stations to collect data on wind speed, temperature and precipitation.

With new information on quantity, load use and forecasted growth in hand, Kanaka constructed

a new reservoir and water distribution system. Kanaka Bar now has water security for next 100 years to support ecosystems health, drinking, irrigation, fire protection, and energy production. Surplus water also supports neighbouring communities should they experience water shortage.

With water certainty in place, Kanaka was then able to invest in food production, processing and storage. Residents are able to grow fruits and veggies year round and are supported to raise poultry and rabbits. They are currently exploring deer farming, dairy and fish products through land-based aquaculture.

The community has identified other emerging sustainability priorities (2016 Climate Change Assessment and Transition Plan, 2021 Community Resilience Plan), including investing in climate resilient housing with solar power to reduce operating and consumer costs and batteries to store extra generated electricity to keep the infrastructure working in the event of a power outage.

Partnerships

Back in 1990, Kanaka Bar's leadership realised very quickly that resources such as people, trust, data and knowledge, technology and money were needed if any changes were to be successful. New relationships with federal and provincial governments (e.g. Ministry of Forests), corporations (e.g. Canadian Pacific Railroad, Canadian National Railroad, BC Hydro) and the fee simple land holders and permit holders (mining, range etc) were established. Strategic third parties such as Innergex, Urban Systems and ZN Advisory Services were also engaged to help the community secure resources, build capacity, and get the work

done. These partners were critical in providing the practical supports needed for the community to achieve its goals.

Impact & Lessons Learned

What happened at Kanaka was because the community spoke and the leaders listened, worked together, and were accountable to action and planning for the long term future (instead of short term economic gains). Transparency is sharing what you know and being accountable.

Values around supporting each other as a community network, no matter what role or status one has, is one of the lessons non-Indigenous settlers are missing and need to learn. Planning and implementation are only as good as your weakest link.

Change flows from action. A plan or vision is needed to focus efforts and assess progress and success. To learn from your failures or live with your success, you need to do.

Leading people back to the land and to feeling proud as a community, starts to reverse the social and mental impacts of colonization. And in its place, we have a new collective unconscious knowing that, regardless of the weather, Kanaka Bar will always be ok.

Where to Find Us

Kanaka Bar Website:

<https://www.kanakabarband.ca/>

Adaption Canada 2020 presentation “Ahead of the Curve: Leading the Way in Indigenous Resilience”, Feb 2020:

<https://www.youtube.com/watch?v=2Uf9qZn8rqs>

Weather Network narrative and video: “How Kanaka is creating a path forward following a climate catastrophe” April

21: <https://www.theweathernetwork.com/en/news/climate/solutions/power-to-the-people-kanaka-bar-food-forest-renewable-energy-climate-catastrophe>

How to Help

Kanaka’s needs and priorities related to water, roads and electricity are known and the biggest limitation is money. Kanaka traditional territory continues to be used by 3rd parties with revenues flowing out.

- Support land back and self-determination initiatives.
- Prioritize flexible revenue and funding models (e.g. revenue sharing models, corporate royalties and philanthropy) in order to ensure that financial and operational supports are meaningful and efficient.
- Provide funds to support community-led initiatives without telling them what to do (paternalism). Give them the means to do and learn from success and failure. When an Indigenous community is healthy - so is the region!



FireSmart celebration in Kanaka Bar, 2019

Case studies previously featured at the BC Climate Roundtable

On November 7th, 2022, the BC Centre for Disease Control and the Public Health Agency of Canada co-hosted a roundtable event with Dr Theresa Tam, the Chief Public Health Officer of Canada.

Dr. Tam reviewed highlights of her most recent annual report, “Mobilizing Public Health Action on Climate Change in Canada”. Three promising local case studies of intersectoral action were also presented. Watch the Roundtable presentations and discussion here: [Roundtable on Climate Change and Health with Dr Theresa Tam - YouTube](#)

A Community-centered Approach to Addressing Climate Change and Supporting Children’s Mental Health

Presented by: Dr Maya K. Gislason, Associate Professor, SFU.
Angel M. Kennedy, Researching for Eco-Social and Equitable Transformation (RESET) Lab, SFU.



Project Description: There is increasingly robust evidence which describes the links between climate change and growing rates of mental health challenges for children and youth, both in Canada and around the world. Our research confirms that mental health is impacted both by direct experiences of climate events and suffering from acute traumas as well as by long-term worry, uncertainty and low-grade cumulative exposures and disruptions to daily life. We have also found that school curricula as well as exposure to disinformation and crisis-oriented communication are contributing to children and youth’s mental health challenges. As a result, we are conducting research, and supporting community-based engagement, which focuses on addressing issues of intergenerational climate justice and educating for resilience, hope and action through integrating the arts and science. This work foregrounds place-based education and is working to foster a whole of person education through experiential learning that engages the heads, hands and hearts of students. This work is intersectoral, intergenerational, and focused on educational, health, and sustainability co-benefits.

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Contact Information:

Dr. Maya Gislason; maya_gislason@sfu.ca

Angel Kennedy; angel_kennedy@sfu.ca

Indigenous Food Sovereignty in Tea Creek

Presented by: Peter Kok, Program Manager, Tea Creek. Flo Sheppard, Chief Population Health Dietitian, and Breanne Frenkel, Northern Health.

Project Description: Tea Creek supports resilient healthy local Indigenous communities and economies built on land-based programs and abundant local food. Regenerative farming and farming training for Indigenous peoples is at the heart of what we do.



Tea Creek transforms lives by building confidence, skills, and self-esteem. Tea Creek is a place where Indigenous people can heal, build their skills, and develop self-confidence, revitalizing the ability of Indigenous nations to be self-sufficient and economically resilient.

Our mission is to revitalize the culture of economic interdependence and food production that was a central part of life for Indigenous peoples throughout the Americas, supporting food sovereignty and climate resilience for rural Indigenous communities. <https://www.teacreek.ca/> **Contact information:** Peter Kok, peter@teacreek.ca, P: 647-335-0737

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Heat Alert and Response System, Ashcroft BC

Presented by Heather Deegan, Director, Population Health, Interior Health

Project Description: A multi-year demonstration project was initiated by Interior Health with funding from Health Canada to support community-led planning and extreme heat response in Ashcroft, BC. Knowledge and approaches acquired through this project are informing similar extreme heat planning in other rural Interior and BC communities. Supporting documentation for this project includes the [Heat Alert & Response Planning for Interior BC Communities: Toolkit](#) (2020) and Canadian Journal of Public Health publication titled: [Development and implementation of a Heat Alert and Response System in rural British Columbia](#) (2022). This presentation speaks to the lessons learned about cross-sectoral action, inclusive of the health sector, to plan and respond to extreme heat. Contact hbe@interiorhealth.ca for more information.



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Dr Tam's annual report can be found here: [Mobilizing Public Health Action on Climate Change in Canada: Chief Public Health Officer's Report on the State of Public Health in Canada 2022 - Canada.ca](#)

Closing remarks



For generations, Indigenous communities warned that the colonial pursuit of commerce and efficiency would have long-term impacts on people and the land they live on.

The Earth's land, water and air is heating up at an unprecedented pace and in B.C., extreme weather is occurring with increasing frequency, intensity and duration, causing eco-anxiety, mental, emotional, spiritual and physical health impacts. Climate change is real and there is no more time for denial, hypocrisy, complacency or apathy.

More climate emergencies and changes are coming and, while we may not be able to stop the weather, we can work together to prepare and mitigate its impacts on our people and on our infrastructure. We need to plan and invest in communities designed for resiliency towards future crises particularly for our most vulnerable neighbours.

Some examples of protective actions described in this report are related to socially cohesive communities – such as checking in on each other during heat events and working with neighbours to prepare for emergencies. Other types of action require more formalized approaches involving intersectoral partnerships, policy advocacy, or research.

The message across these stories is clear - we need to shift our learned value system away from consumption and towards sustainability and prioritizing renewed investment in the foundations of life – air, water, food, shelter - and the voices of community. As demonstrated in these experiences from BC communities, there is a path forward and it begins with a mindshift among community leaders.

The work we did in Kanaka Bar, after experiencing multiple traumatic events and the impacts of colonization, means that my community is now on track to becoming 100% self-sufficient in terms of water, food, shelter and energy which is resilient to the effects of extreme weather and other external crises. Not only that, but we also have a sense of hope, community pride built on engagement and action, and implicit knowledge that no matter what happens we will be ok together. If we can do it, you can too!

“What you do to the land you do to yourself. What happens when you start restoring it?”

As you move forward with national, provincial and local climate adaptation and mitigation initiatives, I hope you draw inspiration from the lessons and experiences included in this report. Drawing from site specific Indigenous forms of knowing and leadership, complimented by Western approaches and technologies, will give you a powerful platform for collaboration and action. In our efforts to come together to heal the land, we also start to collectively address and recover from the harms caused by our shared history of colonization and displacement of Canada’s Indigenous peoples.

Former Chief Patrick Michell

Kanaka Bar First Nation

Acknowledgements

This report was compiled through a collaboration between BCCDC Population and Public Health and PHAC Western Region. Thank you to the project team for the generous contribution of their time and expertise. The value of this project can be measured in both the journey and the outcome.

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Kris Kuruneri – Policy Analyst, Knowledge Mobilization, Western Region, PHAC - *a special thank you to Kris for her exceptional project management skills that kept this project on track and for writing the report. We quite literally couldn't have done this without you.*