HOW CAN WE BUILD RESILIENT COMMUNITIES TO PROTECT HEALTH?

Communities can protect health from climate hazards

Alberta's climate is changing...wildfires, extreme heat events and severe hailstorms happen more often

Climate change adversely affects our _health_
- wildfire <u>smoke</u> reduces lung capacity
- <u>droughts</u> cause mental distress

Health is important, and health-centred, locally-driven _climate actions_ are powerful!
- in the spirit of COP30 in Brazil, **mutirão is collective effort toward a common goal**
- it's important we prioritize HEALTH in collective adaptation and mitigation efforts and here is how...

#1: Partner with groups at higher risk

Not every Albertan has equal access to the resources that create and protect health
- higher sensitivity and exposure to climate hazards increases health risks and negative health outcomes

To address health **<u>equity</u>**, partner with diverse groups at higher risk of health impacts **>> they have unique _insight_ into solutions <<**

Who?: Indigenous People, people with lower incomes, people of colour, and the 2SLGBTQ+ population

#2: Build community capacity to adapt to climate-health risks

Communities understand the climate impacts affecting them
- **<u>social participation</u>** can reveal local risks and vulnerabilities
- unique knowledge can prevent unintended harm to health

Learn how to prevent and respond to **climate-<u>health</u> hazards:**
- > checking on a neighbour in a smoke event
- > organizing a cool place during a heat event

#3: Establish resilient places to protect health

Cities and towns are important drivers of health
- municipal <u>design</u> and climate-resilient buildings can protect health by shielding us from health-harming <u>water</u>, air or heat
- governance through policies and <u>infrastructure</u> can reduce the health impacts of <u>storms</u>, wildfires, smoke, or temperature

Reach out to local leaders to discuss partnering up!

Adaptations where we live, work, and play protect health and build resiliency!

CLICK <u>HERE</u> FOR REFERENCES

Build Climate-Healthy Communities through Partnership

Equity-seeking groups often face **higher health risks** from climate hazards (**wildfires, floods, heatwaves**)

PARTNER WITH EQUITY–SEEKING GROUPS TO PROTECT HEALTH?

Partnerships with these communities support …

EQUITY

RECONCILIATION

MUTUAL LEARNING

Community knowledge strengthens resilience and guides sustainable and locally grounded adaptation.

How to partner for climate-health resilience:

Listen and Learn Together
Include <u>equity</u>-seeking groups as leaders from the start to ensure decisions reflect their rights, knowledge and priorities.

Support Community-led Action
Invest in projects created and led by equity-seeking communities so climate-health solutions reflect their realities and cultural strengths.

Share Knowledge and Benefits
Combine local knowledge and science to design solutions that work for everyone.

Build Long-term Relationships
Commit to ongoing, trust-based partnerships that support sustained community leadership and culturally grounded climate health solutions.

Why it works…

Strengthens Adaptive Capacity to Climate-Health Risks

Strengthens Collective Action "mutirão spirit"

Promotes equity, resilience, and self-determination in climate responses.

Climate-Health Realities in Alberta

Equity-seeking groups experience **higher exposure to wildfire smoke in northern regions**, spring/summer **flooding in southern river communities**, **extreme heat in urban centres** and **disruptions to land-based food systems.** Working with Treaty organizations, Métis Settlements, local health authorities, and community agencies like Calgary and Edmonton newcomer centers ensures climate-health actions are **locally grounded, practical, and culturally respectful.**

We build climate resilience together. Partnering with <u>Indigenous Peoples</u> and equity-seeking groups ensures health, culture and the environment are protected for everyone

COP30 highlights **social participation** as a key strategy to reduce **climate-related health impacts.** Building community capacity is essential for creating **tailored solutions** and **climate-resilient communities**

BUILD COMMUNITY CAPACITY TO PROTECT HEALTH

What is capacity building?
A collaborative process that strengthens existing skills, knowledge and resources for lasting change

Adaptive capacity increases a community's ability to cope with climate-related *health* impacts

Why is capacity important for climate resilience?
Creates tailored health solutions as climate impacts vary by location

Health inequities make some groups more **vulnerable** - increasing **adaptive capacity** supports climate justice while building resilient communities

How to build community capacity
1. **Collaborate with stakeholders:** Engage local businesses, non-profits, and community members to build trust, share resources and strengthen collective resilience
2. **Ongoing public engagement**: Raise awareness to inspire action, shape policy, build social capital, and integrate resident input for diverse local perspectives and knowledge
3. **Innovative methods**
   a. *Backcasting*: Work backwards from a desired future to inform multiple courses of action and enhance preparedness
   b. *Role-play simulations:* Increase awareness and provides insights about local climate health risks, while demonstrating that common ground is possible despite political differences

STRENGTHEN COLLECTIVE ACTION "MUTIRÃO SPIRIT"

BUILD LOCAL COMMUNITY CAPACITY TO SUPPORT HEALTH!

Check out this link to assess local risks!

https://climateinsight.ca/risk-assessment

Prepare for Drought and Heat
- Support engineers & property owners in using heat and fire resistant materials
- Survey rural communities to identify drought risk
- Educate farmers in sustainable agriculture

Boost Wildfire Awareness
- Host videos, webinars or workshops on health risks and community preparedness
- Promote collaboration opportunities
- Share interactive tools for air quality and heat risk

Building resilient cities and infrastructure is central to COP30's global climate agenda.

Green spaces and Sustainable Infrastructure are key solutions to achieving this objective.

BUILD RESILIENT COMMUNITIES TO PROTECT HEALTH

Why Green Spaces are Important

Climate change is intensifying heat, wildfire risk and consequently poor air quality across communities in Alberta. Vulnerable populations – children, elderly residents, outdoor workers, and low-income communities – face the greatest health risks from these climate impacts.

Green spaces and sustainable infrastructure are essential defences that protect public health by:

reducing temperatures through shade and evapotranspiration with trees and vegetation

filtering air pollutants – tree leaves trap particulate matter and absorb gaseous air pollutants

building long-term climate resilience while reducing energy utility costs and infrastructural damage

The Heat Island Effect

Urban areas around the world – including communities in Alberta – face an added climate challenge: **the urban heat island effect**. Neighbourhoods with heat-absorbing surfaces like dark pavements or asphalts can be **1–3°C** hotter than surrounding areas.

Heat islands increase heat related illness and mortality, air pollution and respiratory problems, energy costs (due to increased cooling demands) and strain on infrastructure during summer peaks. These risks highlight the urgent need for climate-resilient solutions. Click to read more about Urban Heat Island!

How can we build resilient communities against heat and poor air quality?

- **Sustainable Infrastructure: Replace heat-absorbing dark pavements** and roofs with light-coloured, reflective materials to reduce surface temperatures, decrease cooling demand, and lessen heat-related health risks.
- **Green Spaces: Expand tree canopy, create more parks** and **naturalized areas**, and **install green roofs, green walls,** and **rain gardens** to provide shade, cool homes and neighbourhoods, and improve air quality.

Green spaces and sustainable infrastructure are amenities, but also essential public health investments.
Bring this up at your next city council meeting.
Push for more green spaces, buildings with green roofs and rain gardens and resilient infrastructure upgrades.
Learn more about climate resilient infrastructure at
climateinsight.ca

CLICK HERE TO SEE REFERENCES

HOW CAN WE BUILD RESILIENT COMMUNITIES

TO PROTECT HEALTH?

Here is a list of **references** that our team used to create these climate-health infographics. Thank you for reading!

Infographic #1: How resilient communities can protect health

1. Romanello M, Walawender M, Hsu SC, et al. Canada: Lancet countdown on health and climate change data sheet 2025. The Lancet. Published online October 2025:S0140673625019191. doi:10.1016/S0140-6736(25)01919-1
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Infographic #2: Partner with diverse groups

1. National Collaborating Centre for Indigenous Health (NCCIH). Climate Change and Indigenous Peoples' Health in Canada.; 2022. doi:10.4095/329528
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Infographic #3: Build community capacity

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3. Canada NR. Building Regional Adaptation Capacity and Expertise Program. August 22, 2018. Accessed November 20, 2025. https://natural-resources.canada.ca/climate-change/building-regional-adaptation-capacity-expertise-program

Infographic #4: Establish resilient places

1. Soltanifard H, Amani-Beni M. The cooling effect of urban green spaces as nature-based solutions for mitigating urban heat: insights from a decade-long systematic review. Clim Risk Manag. 2025;49:100731. doi:10.1016/j.crm.2025.100731
2. Betkowski B. Islands in the heat: research reveals urban hotspots in Edmonton. Accessed November 20, 2025. https://www.ualberta.ca/en/folio/2022/08/islands-in-the-heat.html

In the spirit of **mutirão** from **COP30 in Brazil,** we hope you can participate to protect health within your community!

Oluwayemisi Agbeniyi
Shannon Low
Clea MacIsaac
Rachel Yager

University of Alberta, School of Public Health