CLIMATE WELLBEING SERIES

UBC CLIMATE HUB

Heatwaves, Mental Health and Wellbeing

Illustration by Glenn Thomas

What are heatwaves?

HEATWAVES are one of the fastest-growing climate health and wellbeing hazards for communities around the world.

HEATWAVES can increase experiences of stress, anxiety, irritability, depression, exhaustion, dehydration, heat cramps, heatstroke, fainting, kidney stress, and loss of life.

Feeling irritable, frustrated, anxious, even angry can be common feelings connected to experiencing heat-related impacts.

Heatwave Impacts on Community

Research has found that during heatwaves students in dorms or learning spaces without air conditioning consistently performed worse on cognitive tests and saw negative impacts on academic achievement and outcomes.

In the summer of 2018, temperatures in Quebec exceeded 40°C (with humidity index) for 8 straight days, leading to 86 heat-related deaths.

Rising temperatures also impact our health by producing more air pollution as high temperatures "bake" vehicle exhaust into harmful surface-level ozone and smog.

Different Experiences During Heatwave Events

How heatwaves are experienced can also vary depending on how one is situated amid ***systems*** of colonialism, patriarchy, racism, capitalism, neoliberalism, class, income, age, gender, or ableism.

Pre-existing, ongoing, and expanding community ***inequities*** can magnify risks or threats for different groups and demographics when heatwave events occur.

Inequity and Heatwaves

An example of inequity intersecting with heatwaves is how racialized and marginalized communities are *systemically* underfunded through racist municipal policy practices (like redlining in Black communities).

This results in fewer green spaces, trees, and essential cooling infrastructure and resources.

Such policies lead to disproportionate exposure to deadly urban "heat traps" in racialized and marginalized communities.

Heatwaves and Systems Strain

Heatwaves add strain to health and emergency services

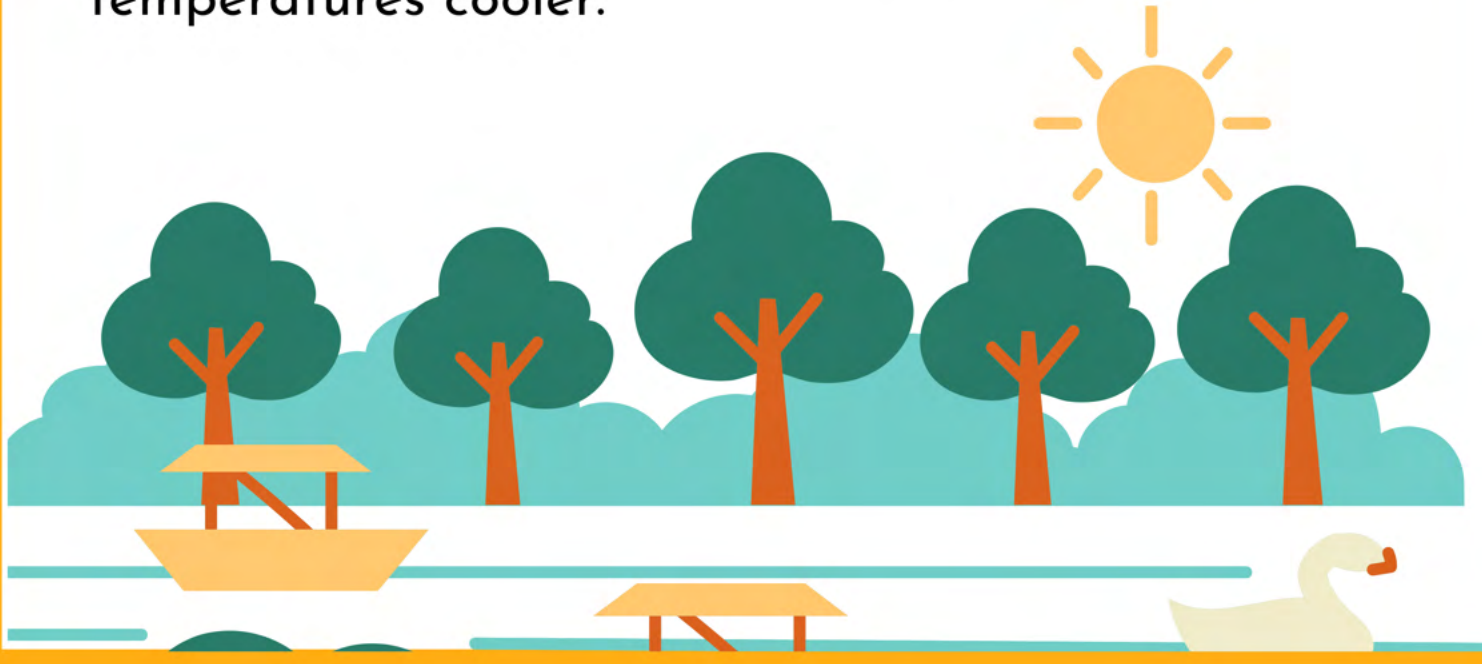
Heatwaves increase strain on water, energy and transportation systems resulting in power shortages or even blackouts

Food and livelihood security may be strained if crops or livestock are lost due to extreme heat

Greening Urban Spaces

Urban areas can feel up to 12 degrees hotter than surrounding rural areas due to the heat island effect. Concrete, asphalt, and shingles, absorb, retain and radiate heat even after sundown.

By contrast, rural areas with vegetation deflect the sun's radiation, and trees provide shade, keeping temperatures cooler.



Collective Level

Call for institutions and community leaders to:

- Promote clear, accessible public messaging that aims to build knowledge about climate change and heatwave impacts on health and wellbeing.
- Prioritize budget resources for those at high risk (e.g. elderly, the unhoused, those living in heat-trap zones, those with pre-existing health needs).
- Call for community leaders and businesses to develop tree canopy and green spaces that can help to cool city landscapes.

Systems Level

- Build systems that can support sustainable "cool sanctuary" spaces where all community members have free, inclusive access to cool, safe infrastructure.
- Prioritize anti-racism and equity building across communities and address legacies of white supremacy and colonialism in city systems, planning, and policy choices.
- Transition community energy dependence AWAY from fossil fuels, a core diver of climate change magnifying the intensity and frequency of heatwave events.

Individual Level

- Stay hydrated, take water with you if you can.
- Be aware of medications that can interfere with body heat regulation.
- Plan ahead, use shaded or air-conditioned commuting routes where possible.
- Avoid travel or exercise during the hottest parts of the day if possible (11 am to 3 pm).
- Shield the top of your head from direct sun.
- Learn about signs of heat illness or distress.
- Check-in with family and friends to foster collective care.

References

- Global risk of deadly heat: Camila Mora et al., in Nature Climate Change
- Heat and Health: WHO, https://www.who.int/news-room/fact-sheets/detail/climate-change-heat-and-health
- Community Resilience & Wellbeing Amid Climate Crisis: Meghan Wise https://sustain.ubc.ca/about/resources/community-resilience-wellbeing-amid-climate-crisis
- Study Finds Link Between Deadly Heatwave Exposure and Redlining Housing Policies: https://e360.yale.edu/digest/study-finds-link-between-deadly-heatwave-exposure-and-redlining-housing-policies
- The burden of heat-related mortality attributable to recent human-induced climate change, Nature Climate Change, 2021.