



Mental Health and Climate Change

May 9, 2024
Climate West



INTRODUCTIONS

**Climate Change and Global Health
Research Group:**

Dr. Sherilee Harper

Stephanie Olsen, MACE Student

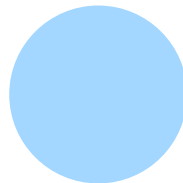
Hannah Bayne, MSc Student



LAND ACKNOWLEDGMENT

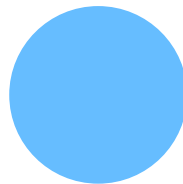
SESSION CONTENTS

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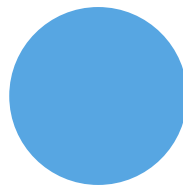
Introduction

Learn a little bit about all of you...



Presentations

Overview of climate change and mental health research in the Prairies



Conclusion

Time for discussion and Reflective poetry reading

Over to Menti!

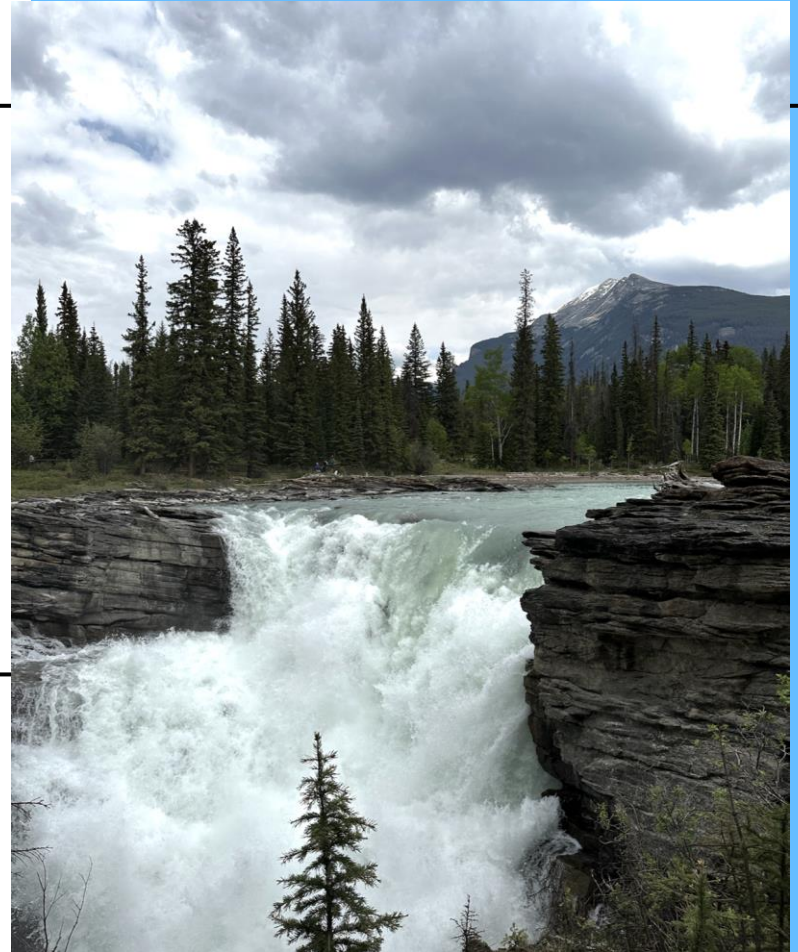
Go to
<https://www.menti.com/>

Research on Climate Change and Mental Health Pathways

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Professor

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Health

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INCREASING CLIMATE CHANGE NEWS COVERAGE

AUTOS | News

Amid climate change warnings, Canadians lukewarm on electric vehicles



As climate change pushes deer north, other animals may lose out

Researchers say woodland caribou could be at risk.

By Erin Bakstrom
May 6, 2024 at 9:30 a.m. EDT



How Much Does It Cost to Fix the Climate Problem?

Climate Solutions Research Initiative

Brazil's floods reveal the growing danger of extreme rain

Insights from Al Jazeera, Associated Press, National Oceanographic and Atmospheric Administration



A person wearing a red hoodie and dark pants is walking away from the camera down a paved path. The path is lined with trees and greenery, and the scene is bathed in a warm, golden light, suggesting late afternoon or early morning. The person has their hands raised behind their head.

The climate change crisis is a
human health crisis...

... but recognizing this can
inspire *climate action*.



ipcc

INTERGOVERNMENTAL PANEL ON
climate change



WMO



UNEP

Global warming
has caused
*dangerous and
widespread*
disruption in
nature...

IPCC 2022

An aerial photograph showing a multi-lane road that has been completely inundated with floodwater. The water extends far beyond the road's edges, covering fields, forests, and parts of a nearby town. Power lines and poles are visible along the right side of the road. The sky is overcast, and the overall tone is somber and urgent.

...and climate change is affecting the
lives of *billions of people*, despite
efforts to adapt.

IPCC 2022

A photograph showing a line of women in a dry, brown field, bent over and planting seeds into the soil. They are wearing colorful headwraps and traditional patterned skirts. Some are holding small blue or green plastic cups. The background shows a line of green trees under a grey sky. The text 'Climate change has already impacted the health of' is overlaid in white, and 'millions of people' is in yellow script below it.

Climate change has
already impacted
the health of

*millions of
people*

Air Pollution & Increasing Allergens

Asthma, allergies, cardiovascular and respiratory diseases

Extreme Heat

Heat-related illness and death, cardiovascular failure

Drought

Water supply impacts, dust storms, Valley Fever

Environmental Degradation

Forced migration, civil conflict, loss of jobs and income

Wildfires & Wildfire Smoke

Injuries, fatalities, loss of homes, cardiovascular and respiratory diseases

Degraded Living Conditions & Social Inequities

Exacerbation of racial and health inequities and vulnerabilities, loss of employment

Changes In Vector Ecology

Lyme disease, West Nile Virus, hantavirus, malaria, encephalitis

Food System Impacts

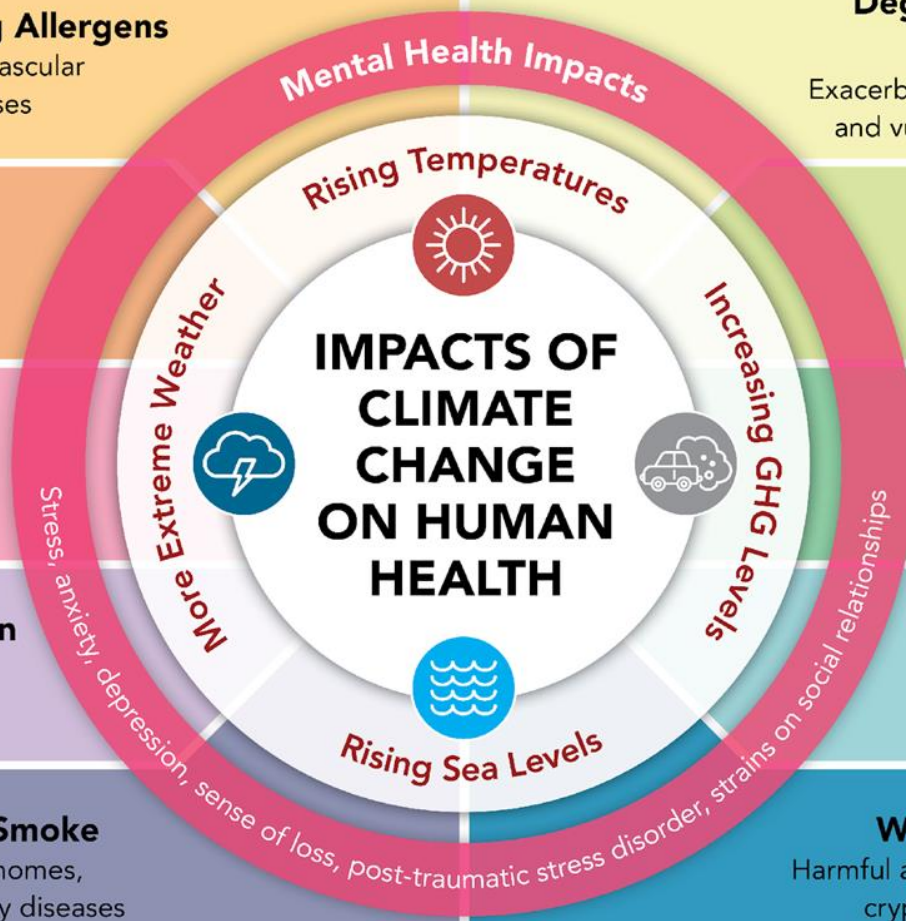
Malnutrition, food insecurity, higher food prices, foodborne illness

Severe Weather & Floods

Injuries, fatalities, loss of homes, indoor fungi and mold

Water Quality Impacts

Harmful algal blooms, campylobacteriosis, cryptosporidiosis, leptospirosis





Climate change has
already had severe
and widespread
mental health impacts

ipcc
INTERGOVERNMENTAL PANEL ON climate change





Mental health risks have emerged from *weather & climate extremes*

[LAFD Photo]

ipcc
INTERGOVERNMENTAL PANEL ON climate change






Slow-onset climate changes have increased
mental health challenges.

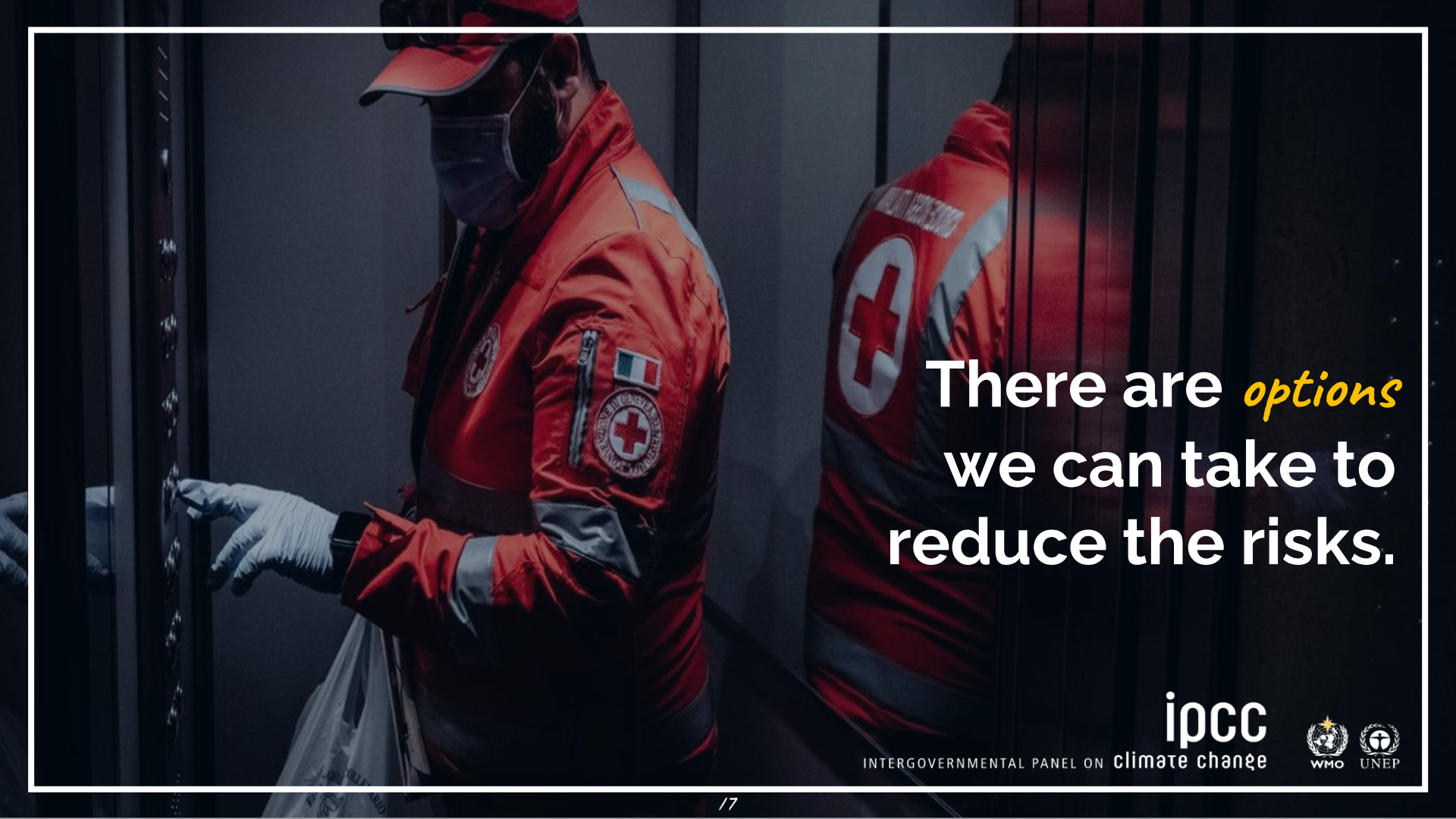
[LAFD Photo]

ipcc
INTERGOVERNMENTAL PANEL ON climate change



A photograph of a vast field of sunflowers in the foreground, with a dark, heavy, and stormy sky above. The sunflowers are in full bloom, with bright yellow petals and dark brown centers. The sky is filled with dark, swirling clouds, creating a dramatic and somewhat ominous atmosphere. The overall scene suggests a contrast between the vibrant life of the sunflowers and the potential for adverse weather conditions.

Adverse mental health outcomes can emerge, even if someone has *has not* personally or directly experienced climate change impacts



There are *options*
we can take to
reduce the risks.

ipcc

INTERGOVERNMENTAL PANEL ON climate change





Direct Mental Health Impacts

Presented by Hannah Bayne
Master of Science in Epidemiology
School of Public Health, University of Alberta

Case Study of Direct Impacts

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In the Canadian Context... 2016 Fort McMurray Wildfires and Evacuations

- **May 2016**
 - Over 90, 000 people evacuated
 - 2,400 structures destroyed
- Costliest disaster in Canadian history

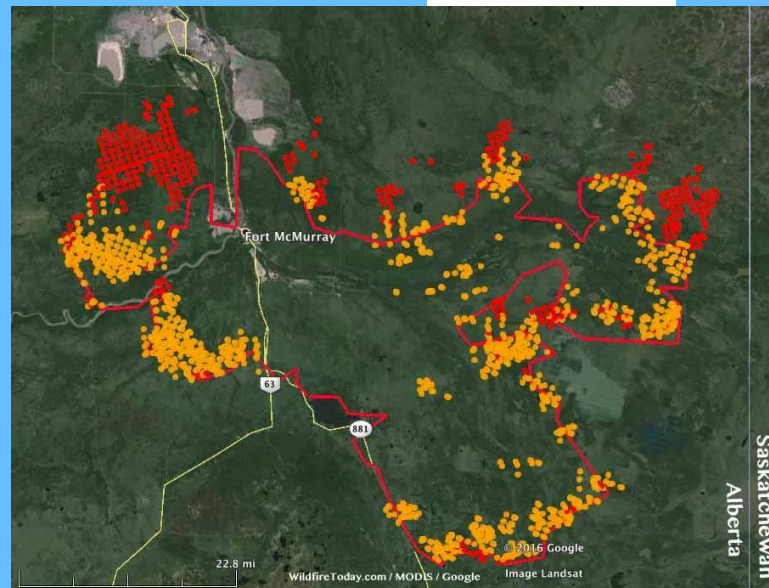
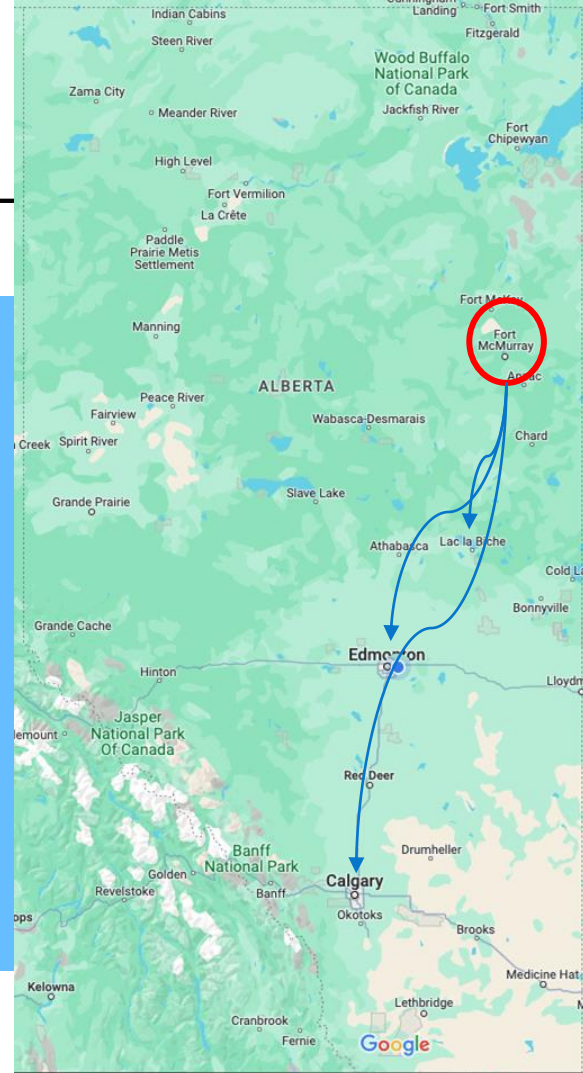


Photo from wildfiretoday.com

Case Study of Direct Impacts

In the Canadian Context... 2016 Fort McMurray Wildfires and Evacuations

- Evacuees went to Lac La Biche, Edmonton and Calgary
- Only one highway out of the city



Short-Term Impacts

In the Canadian Context... 2016 Fort McMurray Wildfires and Evacuations

- **3 Months After...**
 - 29.1% of adults met the criteria for PTSD
 - 25.5% of adults met the criteria for depression
 - 19.8% of adults met the criteria for anxiety*
- **1 Year After...**



**1 in 3 people had clinically significant depression,
anxiety, PTSD, insomnia or substance use**

*5-6 months after

**In the
Canadian
Context...**
2016 Fort
McMurray
Wildfires and
Evacuations

- **18 Months After...**
 - 13.6% of adults met the criteria for PTSD
 - 24.8% of adults met the criteria for depression
 - 18.0% of adults met the criteria for anxiety

Medium-Term Impacts

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Among Grade 7-
12 Students

● At 1.5 Years

● At 3.5 Years

46%

met the criteria for PTSD,
anxiety, depression, or
substance use

51%

**In the
Canadian
Context...**
2016 Fort
McMurray
Wildfires and
Evacuations

- 5 Years After...
 - 37.4% have “low resilience” [predicted by a previous PTSD diagnosis]

In the Canadian Context... 2016 Fort McMurray Wildfires and Evacuations

- In 2020, Fort McMurray experience flooding and the onset of the COVID-19 pandemic...
 - COVID + Wildfire **OR** Flood =
 - 10x PTSD
 - 11x Anxiety
 - COVID + Wildfire + Flood =
 - 11x PTSD
 - 18x Anxiety

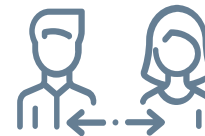
Common Mental Health Supports



Information



Medication



Counselling or
Psychotherapy

Motivational Barriers

- Stigma
- Pessimism
- Not knowing if it will help
- Not knowing where to seek help
- Feeling unable to initiate contact
- Desire for self-reliance

Structural Barriers

- Not receiving information*
- Financially inaccessible
- Non response after initial contact
- Help not available or offered

*women 1.5 times more likely to receive information than men

Who Is Disproportionately Impacted?

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Junior high and high school students

People with pre-existing mental health conditions

Those who have experience compounding disasters

Elementary students

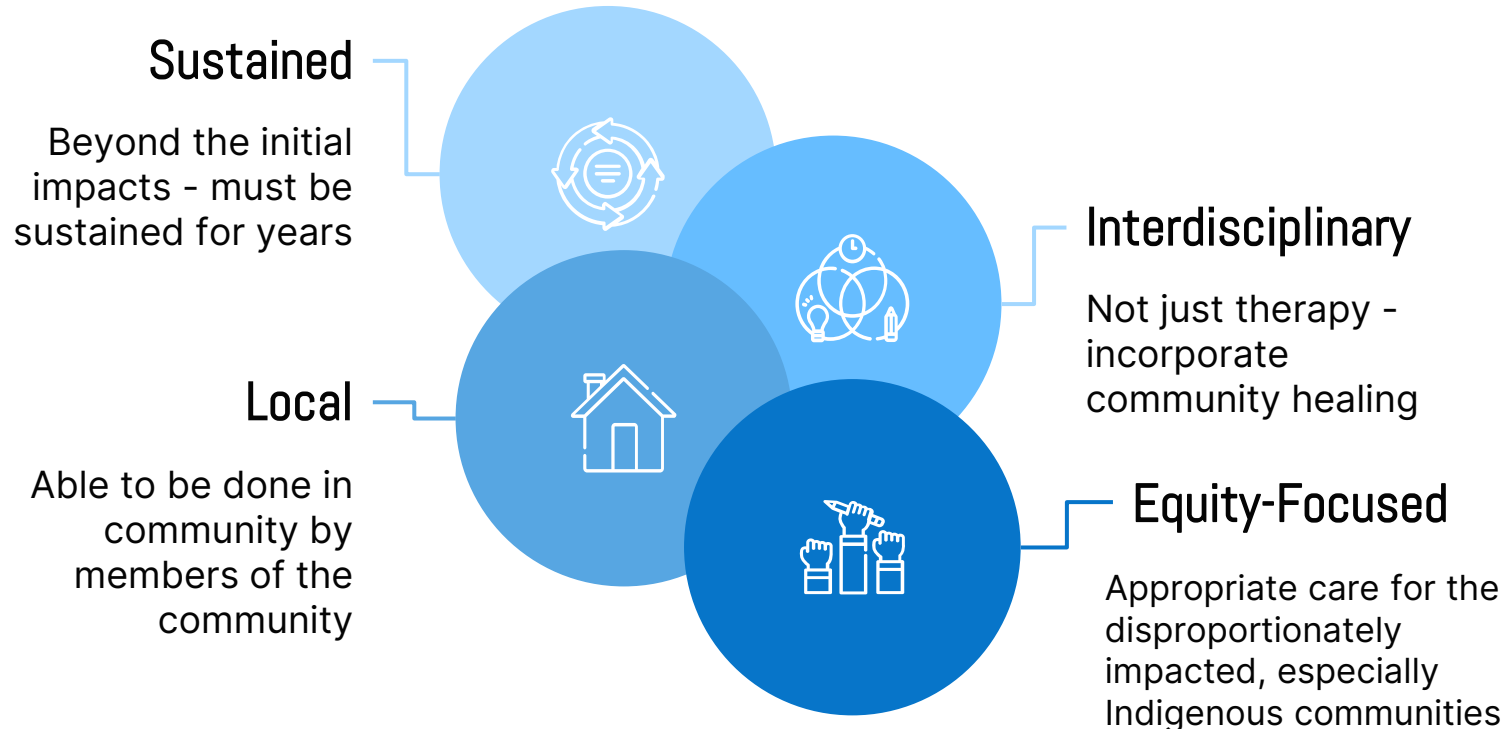
Women

Racialized people

First Nations and Métis community members

Those with limited friend and family support

What Makes a Good Response?





Emotional Responses to Climate Change in the Prairies

Sherilee Harper

Professor

Canada Research Chair in Climate Change
and Health

@Sherilee_H

Sherilee@ualberta.ca



Climate change impacts mental and emotional health...
... but how common are these
experiences?

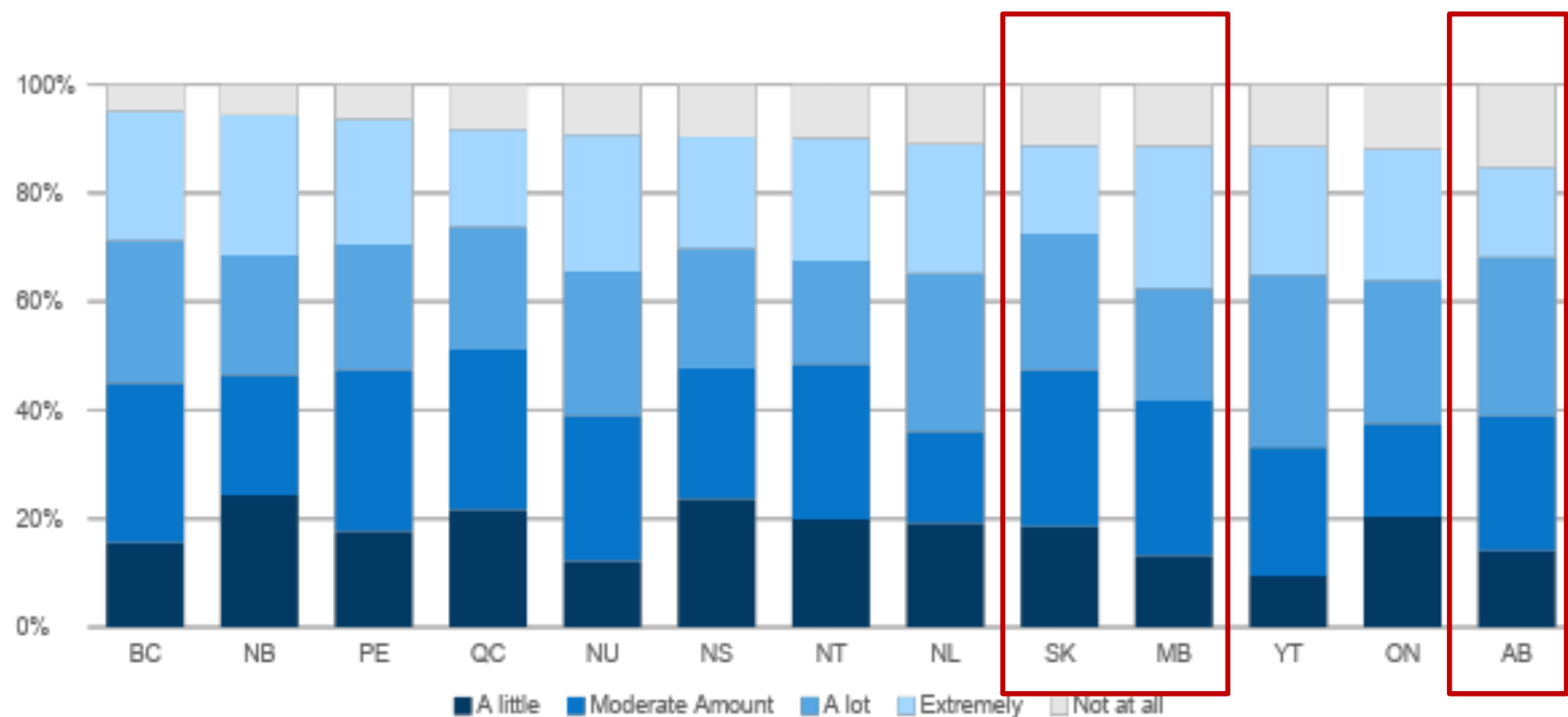
A national climate change survey

Design	Cross sectional survey of people 13 years old and older
Survey Instrument	10-minute questionnaire
Sampling	Multi-stage, multi-stratified random sampling probability procedure
Recruitment	Random selection through an addressed letter or telephone call
Data Analysis	On-going

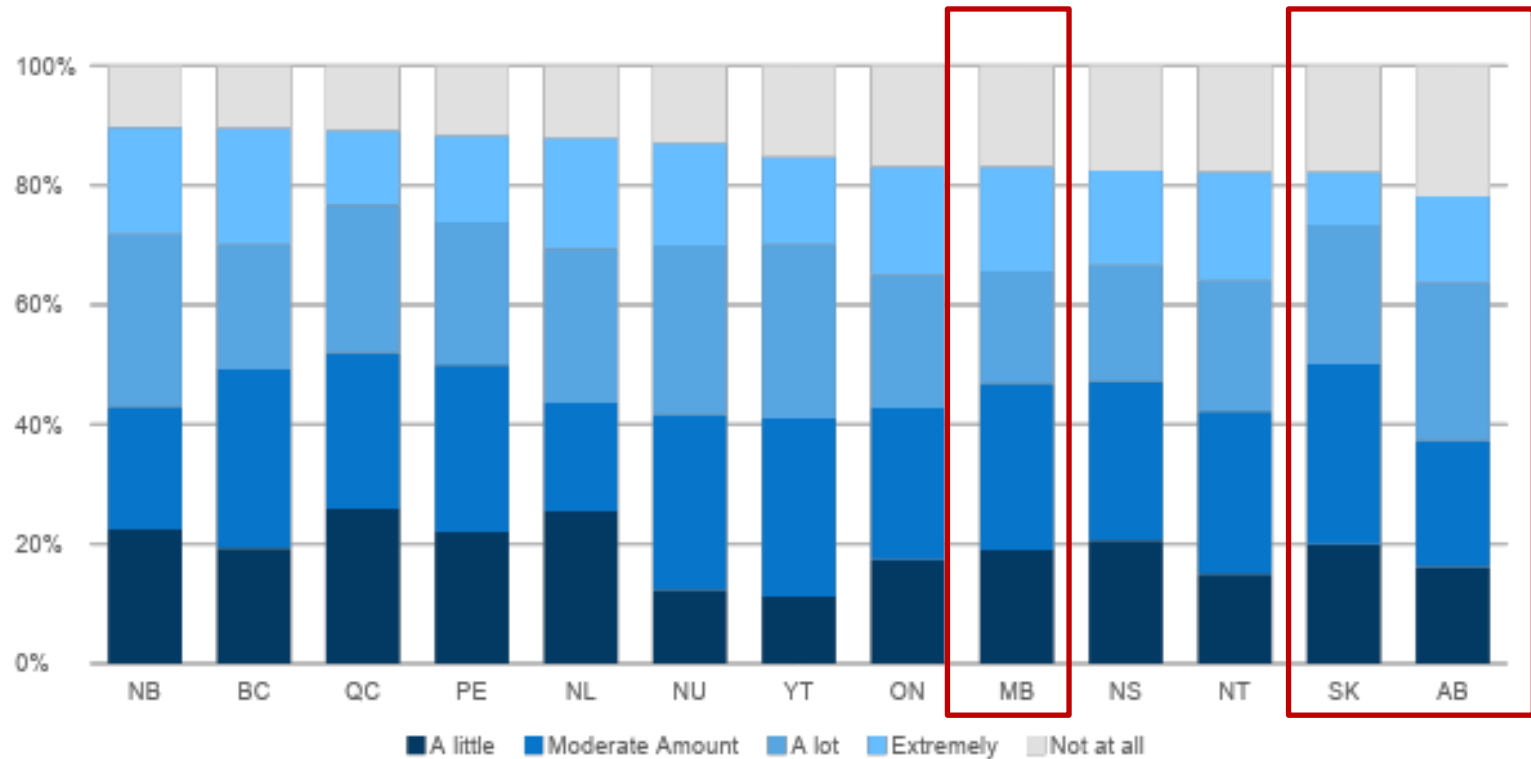
5 KEY

FINDINGS

CONCERNED



WORRIED



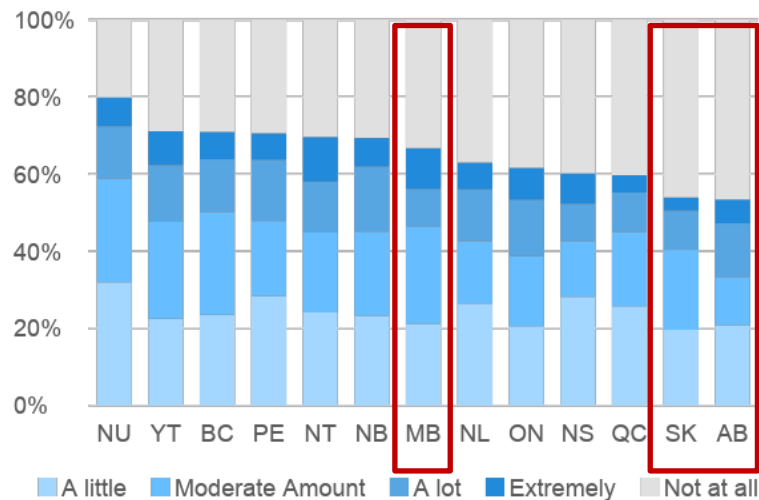


**Most people
are worried &
concerned**

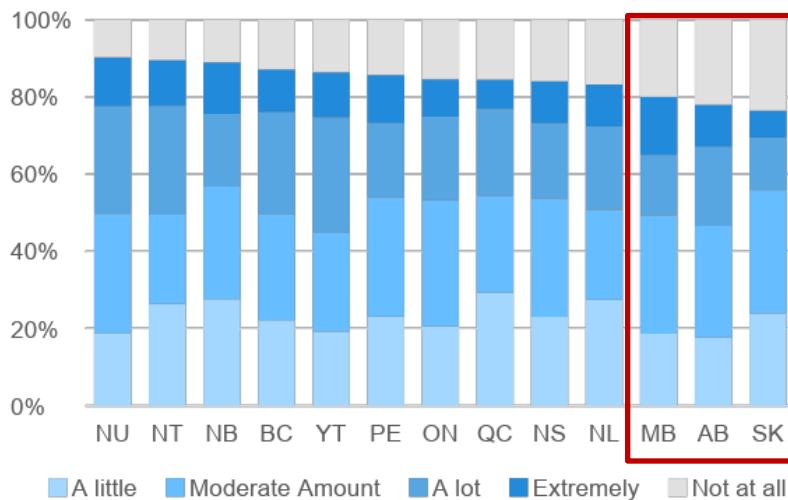
#1

GRIEF & SADNESS

GRIEF



SAD





**Most people
experience
sadness & grief**

#2

CLIMATE CHANGE ANXIETY

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CLIMATE CHANGE ANXIETY SCALE

● Cognitive Consequences

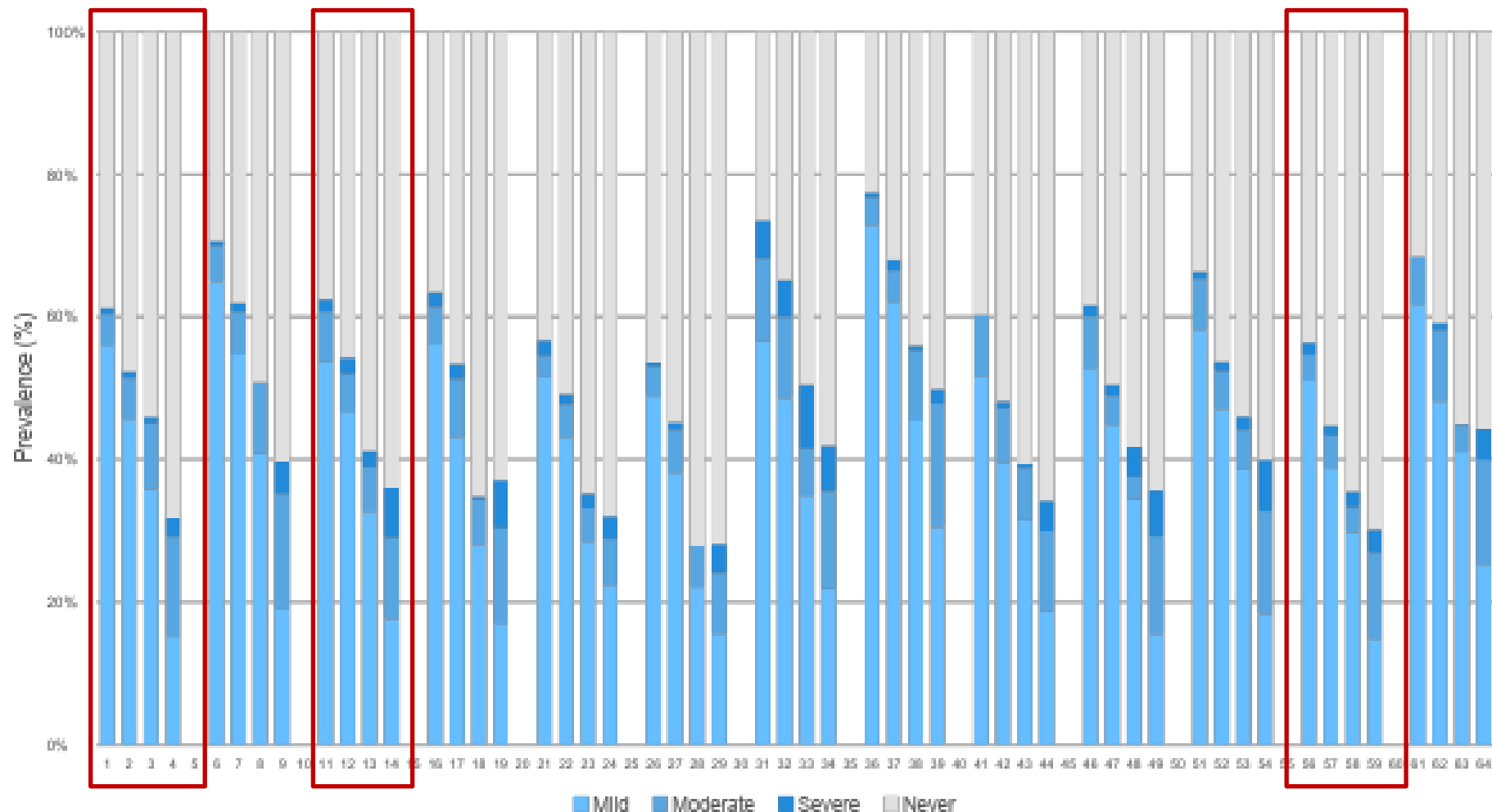
- Thinking about climate change makes it difficult for me to concentrate
- Thinking about climate change makes it difficult for me to sleep
- I have nightmares about climate change
- I find myself crying because of climate change

● Rumination

- I think, "why can't I handle climate change better?"
- I go away by myself and think about why I feel this way about climate change
- I write down my thoughts about climate change and analyze them
- I think, "why do I react to climate change this way?"

● Functional Impairment

- My feelings about climate change negatively affect my daily life



Statistically Significant Differences

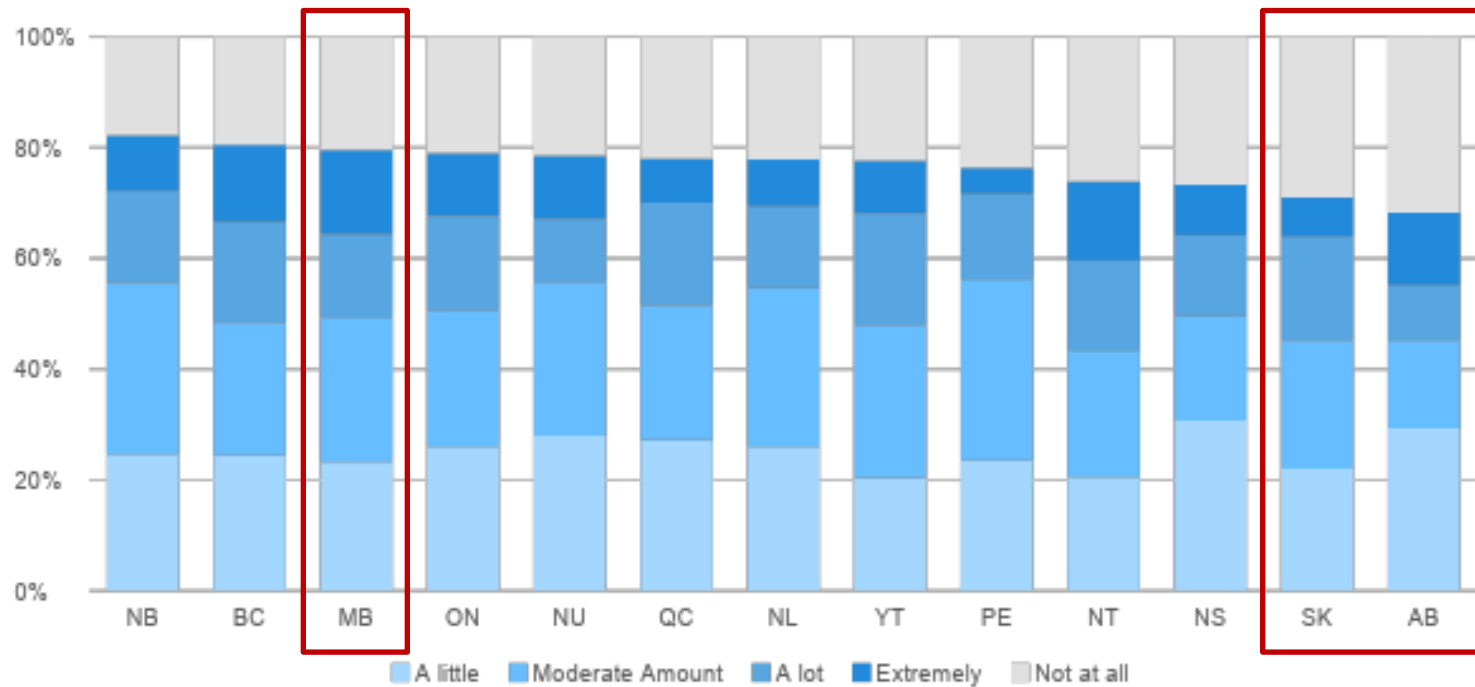
- The odds of experiencing higher levels of climate change anxiety was higher in the Prairies Region than Ontario and the Atlantic Region.
- The odds of experiencing higher levels of climate change anxiety was highest in the North.



Experiencing climate
change anxiety
is higher in the Prairies
than some regions

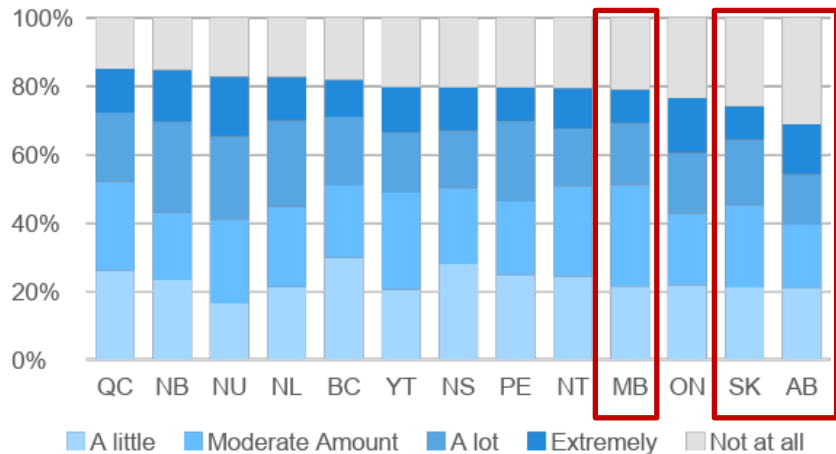
#3

ANGER

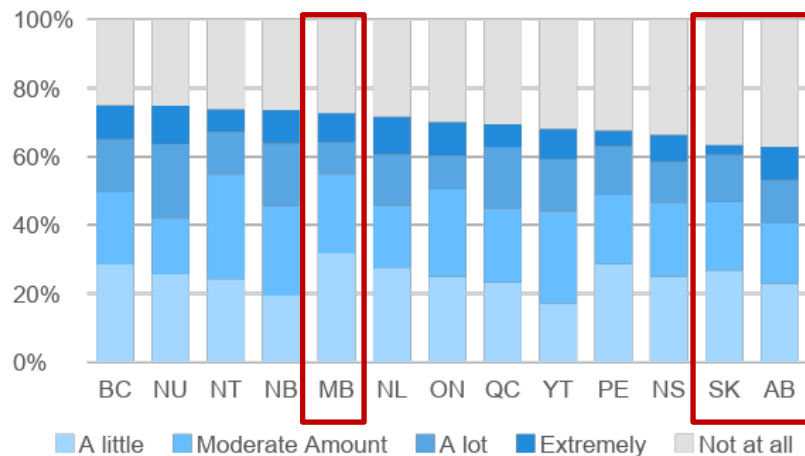


Action-oriented emotions

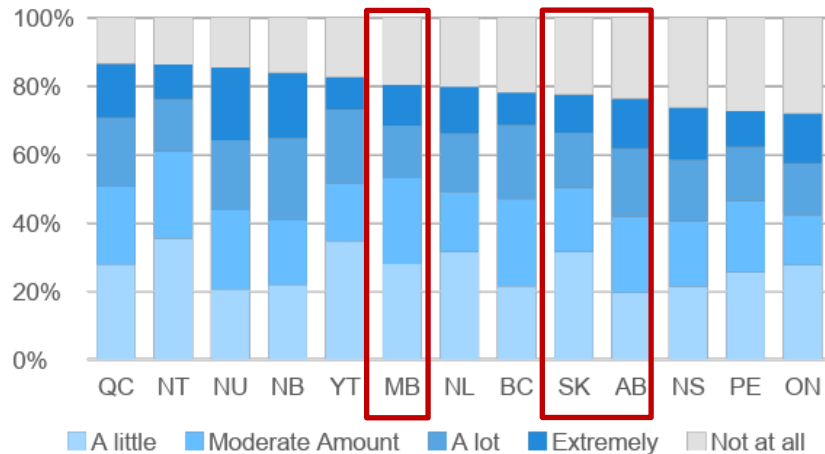
HELPLESS



HOPELESS



POWERLESS



Prairies Specific Results

Climate Change Anxiety

Those who reported higher levels of climate change anxiety had a higher odds of taking action.

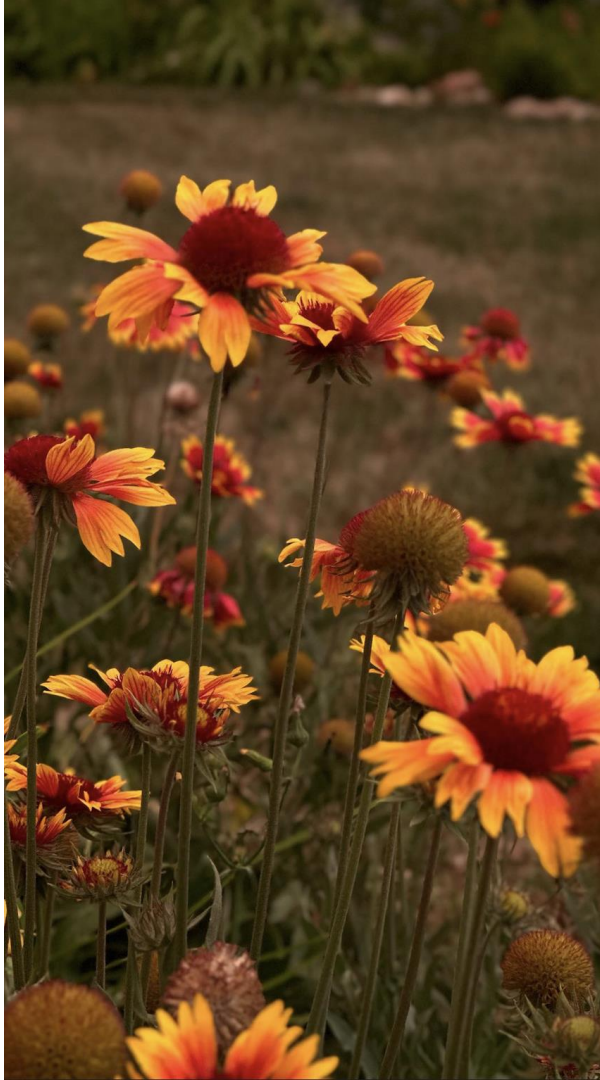
Most Emotions

Those who reported higher levels of climate change emotions had a higher odds of taking action.

Does action not lower
climate emotions?

... or ...

Does climate emotion
lead to action?



Climate emotions can
be associated with
individual & collective
action

#4

CLIMATE EMOTIONS AREN'T EVENLY DISTRIBUTED

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Emotions: Worry, Anger, Powerless, Hopeless in the Prairies

- Significantly higher for youth
- Significantly higher for cis-gender women and non-binary people than cis-gender men



Climate Change Anxiety in the Prairies

- Significantly higher for youth
- Significantly higher for cis-women & non-binary people than cis-men
- Significantly higher in urban locations
- Significantly higher for Indigenous Peoples
- Significantly higher if you have directly experienced climate change impacts
- Significantly higher if you have friends or family who have directly experienced climate change impacts



**Climate emotions vary
by intersecting socio-
demographic
characteristics**

#5

SUMMARY

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01

Most people are
worried & concerned

02

Most people
experience
sadness & grief

03

Experiencing climate change
anxiety is higher in the
Prairies than some regions

04

Climate emotions can be
associated with individual &
collective action

05

Climate emotions vary by
intersecting socio-
demographic characteristics



Ecological Grief

Presented by Stephanie Olsen
Master of Arts in Community Engagement
School of Public Health, University of Alberta

- **Ecological grief** is a wide range of **emotional responses to ecological loss and destabilization, and its impacts** on our lives and communities
 - Grief for **loss of the natural world**
 - Loss of ecosystems, waterways, plants and animals, solastalgia
 - Grief for **personal, social, cultural, and political losses that ripple out** from ecological destabilization
 - Loss of land-based knowledge, identity and lifestyles, eco-reproductive concerns, loss of future prospects, health issues, political grief

Ecological
Grief can feel
like

A word cloud of emotions associated with ecological grief. The words are arranged in a scattered, overlapping manner. The colors of the words vary, with some in dark blue, some in light blue, and some in a teal/cyan color. The words include: love, numbness, dread, anger, guilt, yearning, solastalgia, sadness, helplessness, and anxiety. The word 'anxiety' is the largest and most prominent at the bottom right, while 'dread' is the smallest and located at the top right.

love numbness dread
anger guilt
yearning
solastalgia sadness helplessness
anxiety

ECOLOGICAL GRIEF IS...



Widely
experienced



Not a disorder



An expression
of love



Disenfranchised

Aylward et al., 2022; Albrecht, 2019; Budziszewska, & Głód, 2021; Comtesse et al., 2021; Cunsolo & Ellis, 2018; Doka, 2002; Gonzalez-Hidalgo et al., 2022; Hamilton, 2022; Hathaway, 2017; Head, 2016; Lawrance et al., 2022; Lertzman, 2015; Machado de Oliveira, 2022; Martiskainen et al., 2020; Nair et al., 2019; Ojala et al., 2019; Pikhala, 2024; Randall, 2009; Sangervo et al., 2022; Tsachakert et al., 2019; Wray, 2022

STRATEGIES FOR ENFRANCHISING ECOLOGICAL GRIEF: PRELIMINARY RESULTS



Spaces for
emotional honesty

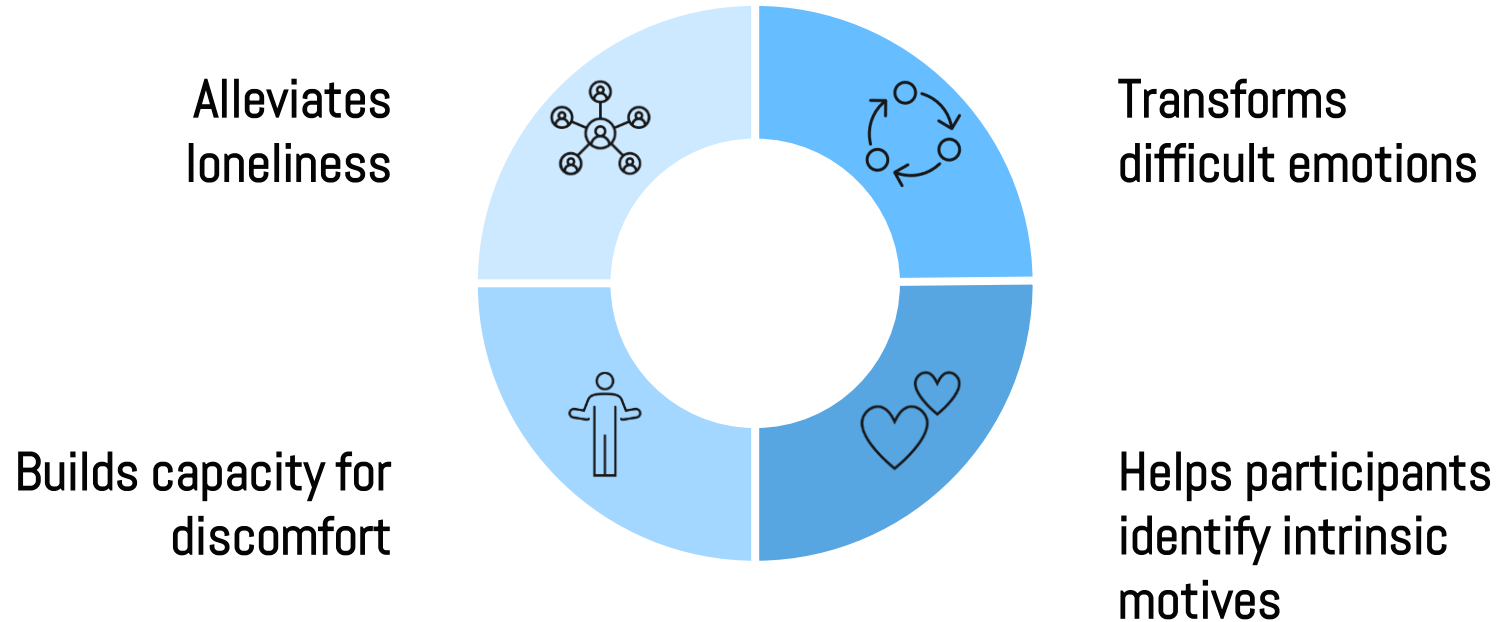


Rituals



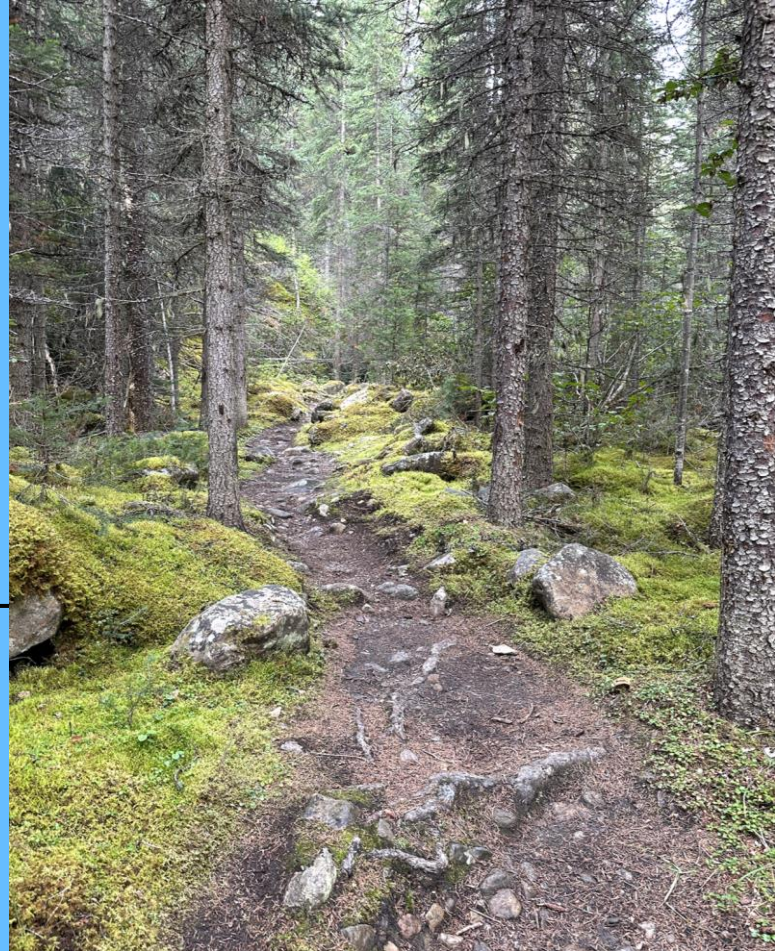
Connecting to the
more than human
world

EFFECT OF ENFRANCHISING ECOLOGICAL GRIEF: PRELIMINARY RESULTS



“The only way to survive great loss is by caring for what remains with more heart than before.”

—Elizabeth Rush,
*Author of The Quickening:
Creation and Community at
the End of the Earth*





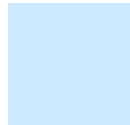
Toolkits and Resources

Based on the work of Madison Cooper, MSc

Presented by Hannah Bayne
Master of Science in Epidemiology
School of Public Health, University of Alberta

Climate Cafés (From Climate Psychology Alliance)

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Collective

Emotional processing with others, not as an individual activity



Facilitated

Has a facilitator who runs the session and creates a safe space for participants



Emotion-Oriented

Allow people to feel emotions without offering advice or suggesting action



Peer-to-Peer

Connecting with others in your circle who feel similarly to you and who are like-minded about the climate crisis

Benefits of Climate Cafés

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01



Resiliency

Build sustained capacity for empathy and action by acknowledging difficult emotions

02



Validation and Support

Feeling supported in specific emotional experiences and not alone in complex climate related emotions

03

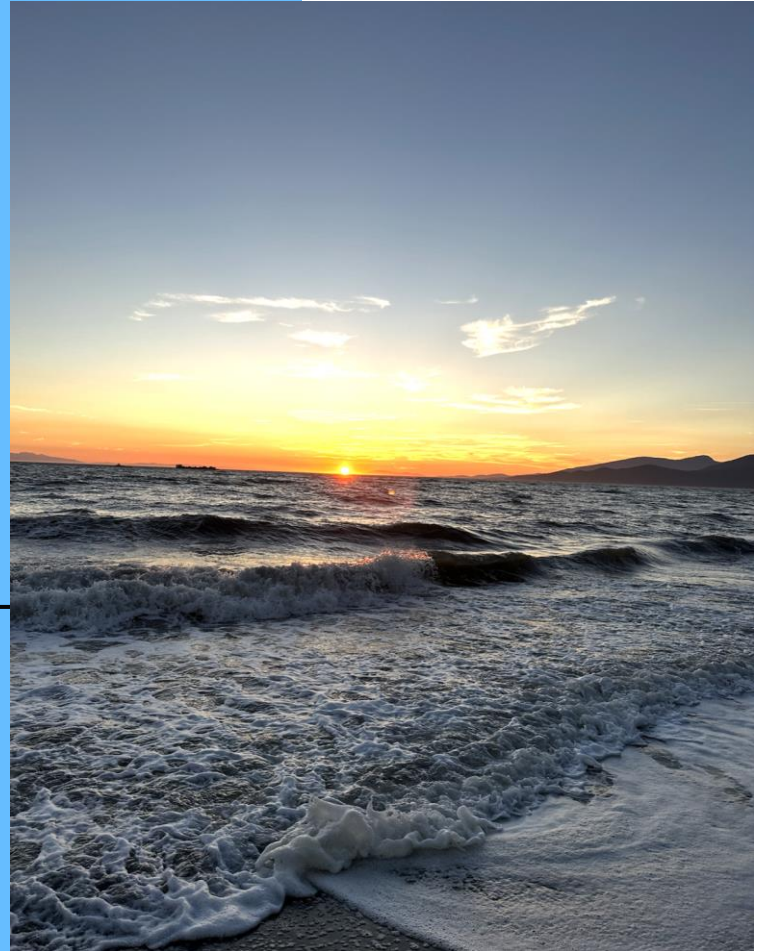


Community-Building

Connection with others through active listening and connecting on all emotions (anxiety, grief, hope, joy, resilience)

“The antidote to despair is
purpose, not action.”

—Participant,
*From Madison Cooper's
MSc Thesis Research*

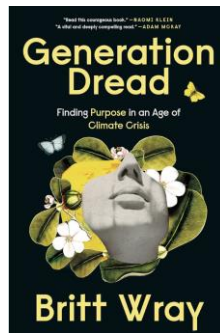


Other Resources

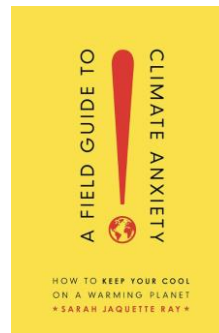
- **Emotional Resilience Toolkit for Climate Work from the Climate Psychology Alliance Northwest Pacific Chapter (For Groups)**
 - *Handbook to provide emotional support and tools through facilitated sessions for those working in climate change fields*
- **Good Grief Network 10-Step Program (For Individuals)**
 - *10-week program to resilience and empowerment during the climate crisis with weekly virtual small group meetings*
- **Good Grief Network Writing Through It Program (For Individuals)**
 - *8-week writing prompt based program with opportunities to share writings with other participants and meet synchronously online*
- **Refugia Retreats**
 - *Based in Alberta, Refugia supports individuals and organizations in climate change emotions through programs and weekend retreats*

Book Recommendations

Generation Dread by Dr. Britt Wray



A Field Guide to Climate Anxiety by Sarah Jaquette Ray



Saving Us: A Climate Scientist's Case for Hope and Healing in a Divided World by Dr. Katharine Hayhoe

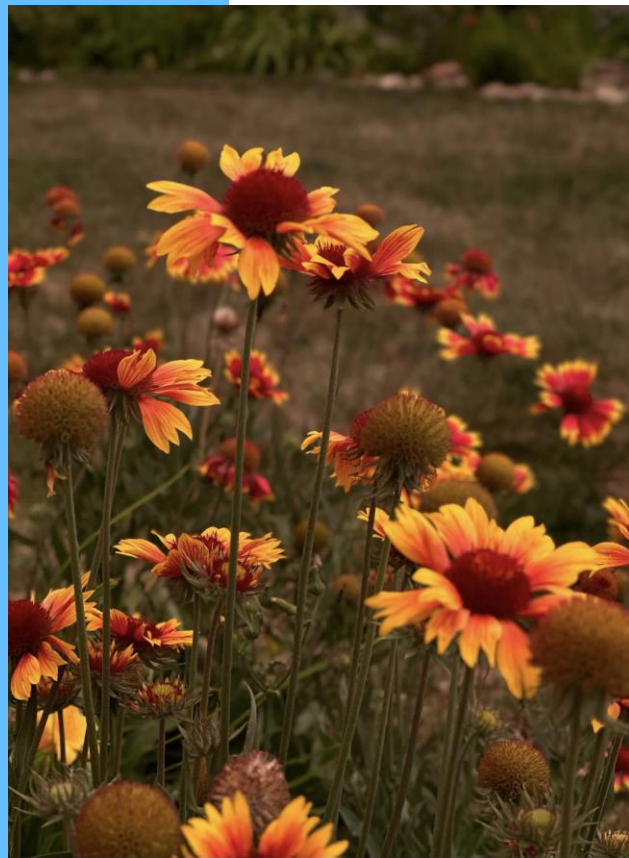


For the Hardest Days

by Clint Smith

Some evenings, after days when the world feels like it has poured out all its despair onto me,
when I am awash with burdens that rests atop my body like a burlap of jostling shadows,
I find a place to watch the sun set.
I dig my feet into a soil that has rebirthed itself a millions times over.
I listen to the sound of leaves as they decide whether or not it is time to descend from their branches.
It is hard to describe the comfort one feels in sittings with something you trust will always be there,
something you can count on to remain familiar when all else seems awry.

How remarkable it is to know that so many have watched the same sun set before you.
How the wind can carry pollen and drop it somewhere it has never been.
How the leaves have always become the soil that then become the leaves again.
How maybe we are not so different than the leaves.
How maybe we are also always being reborn to be something more than we once were.
How maybe that's what waking up each morning is.
A reminder that we are born of the same atoms as every plant and bird and mountain and ocean around us.





Q&A



DISCUSSION & REFLECTION

RESOURCES - General Mental Health

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- Addiction Helpline – 1-866-332-2322
- Mental Health Helpline – 1-877-303-2642
- Crisis Text Line - Text CONNECT to 741741
- Talk Suicide – Call or Text 988
- Canadian Mental Health Association (Edmonton) 24/7 Distress Line – 780-482-4357 (HELP). They also offer NO-COST Drop-In Single Session Counselling and an Online Crisis Chat – <https://edmonton.cmha.ca/what-we-do/services/crisis-services/>
- For 2SLGBTQIA+ community: Brite Line 24/7 Crisis Line – 1-844-702-7483
- For Indigenous Peoples:
 - National Indian Residential School 24/7 Crisis Line – 1-866-925-4419
 - Hope for Wellness 24/7 Crisis Line – Chat online at <https://www.hopeforwellness.ca/> or Call 1-855-242-3310

RESOURCES - Climate Change and Mental Health

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- **Good Grief Network:** www.goodgriefnetwork.org
- **Climate Psychology Alliance:** <https://www.climatepsychologyalliance.org>
- **Climate Psychology Alliance North America:**
<https://www.climatepsychology.us/>
 - *Including climate aware therapist directory*
- **Mental Health and Climate Change Alliance:** <https://mhcca.ca/resources>
- **UBC Climate Wellbeing Hub:** <https://climateemergency.ubc.ca/wellbeing/>
and <https://ubccclimatehub.ca/>
- **Refugia Retreats:**
<https://www.refugiaretreats.com/>
- **Work That Reconnects and Joanna Macy:**
<https://workthatreconnects.org/> and <https://www.joannamacy.net/main>

Thank
You!

