

No Time to Waste:

Decision-making for climate action and the critical years ahead for the AKBLG Region

April 22, 2022

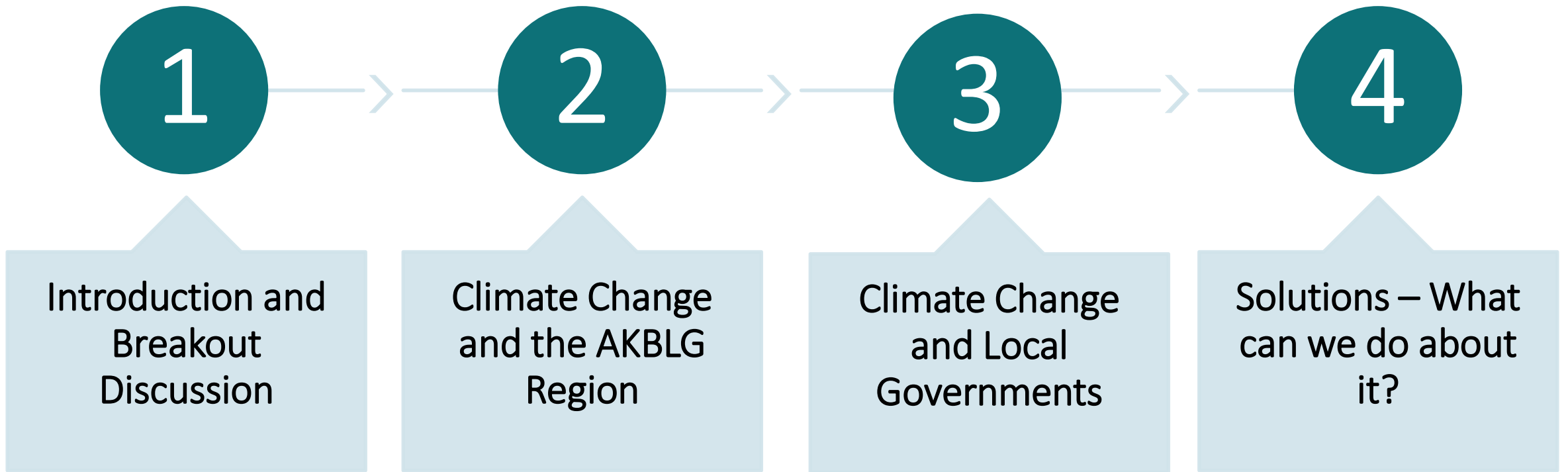
Sarah-Patricia Breen, PhD

Jayme Jones, MA

Lauren Rethoret, MRM



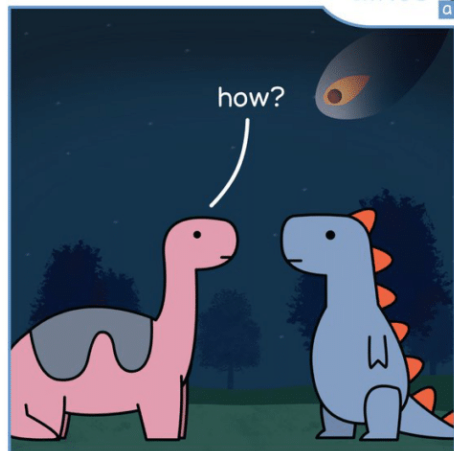
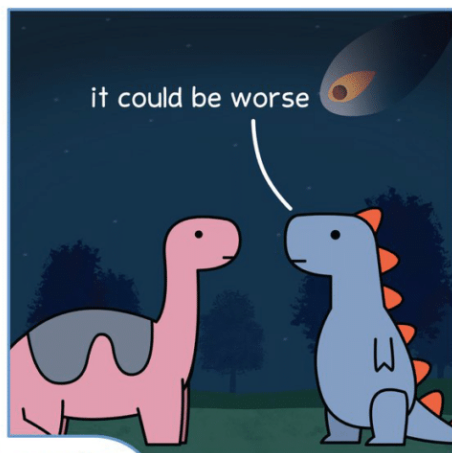
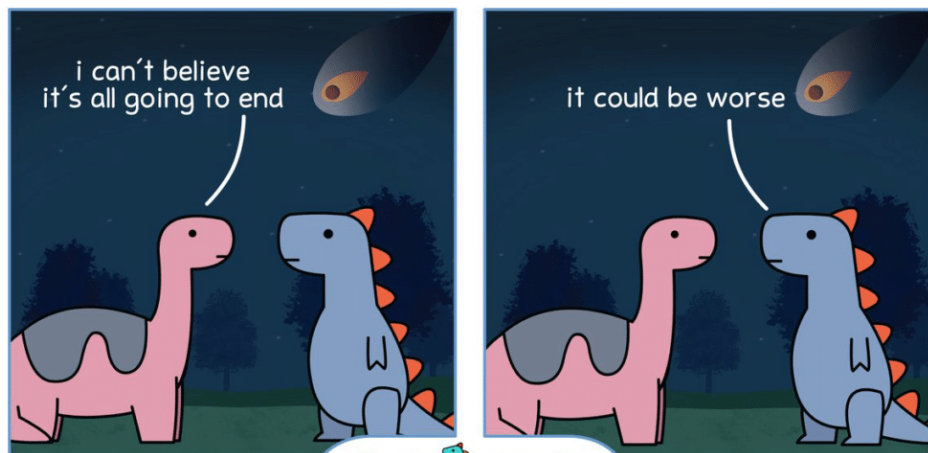
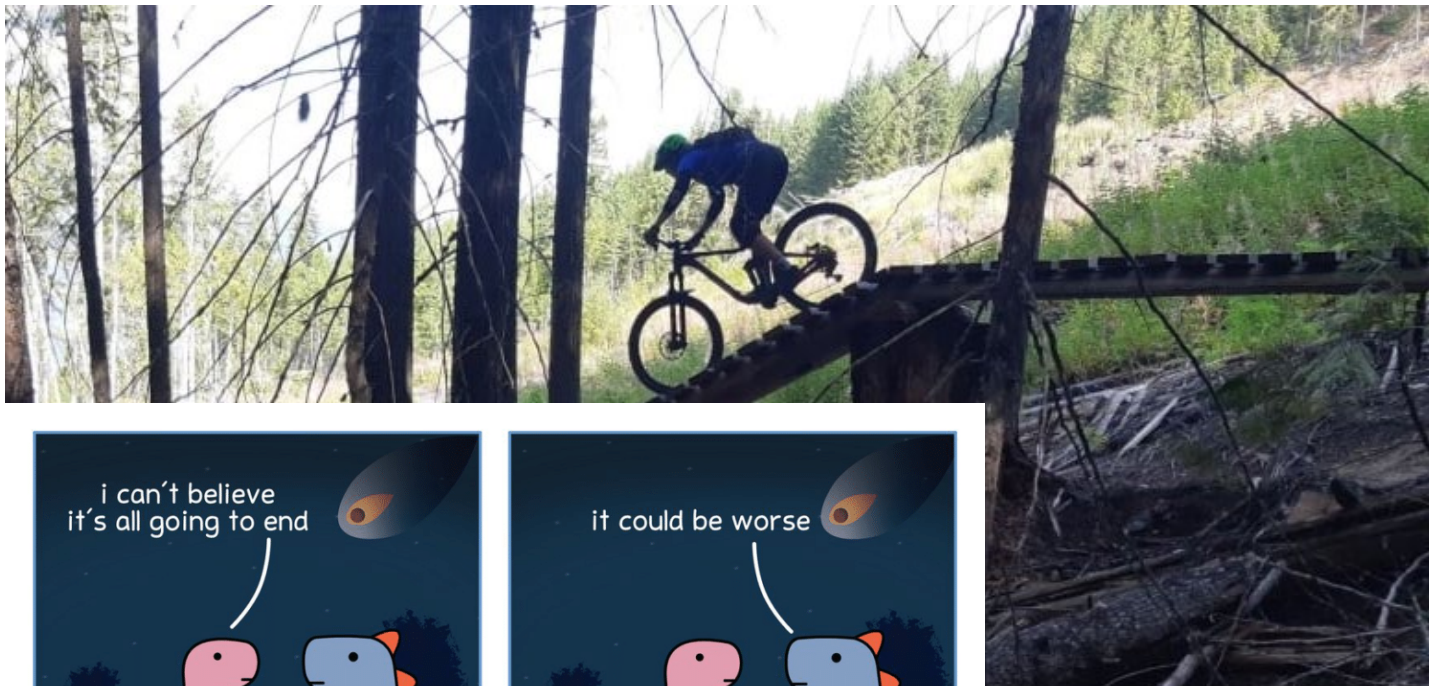
The journey today...



About Us

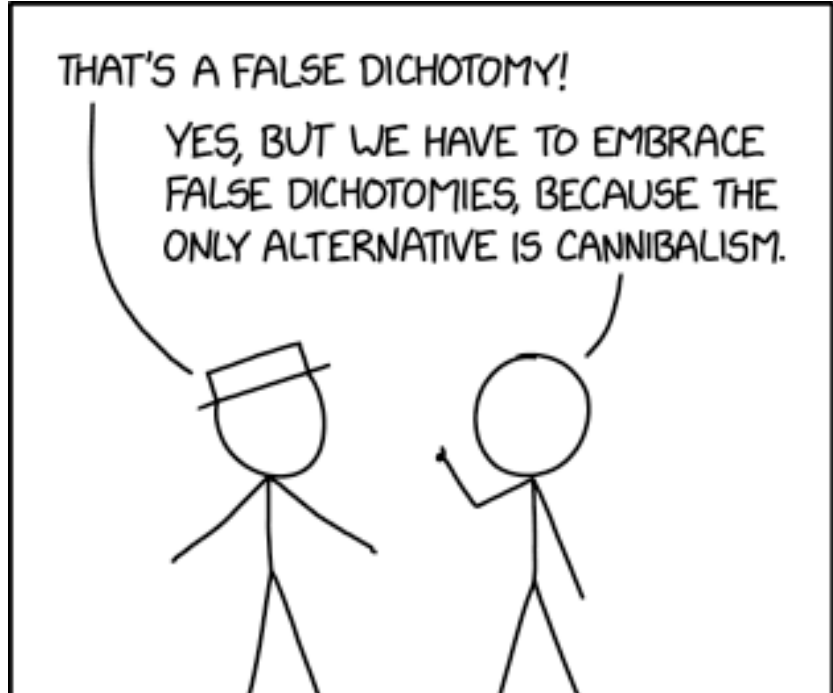






dinos and comics

Rewriting EXTINCTION







Local governments are on the front line of climate change

Opening Activity

Breakout Discussion

- Find a partner
- 8 minutes, 2 questions:
 1. How has your community experienced climate change in the last few years?
 2. How are your community members responding to your local government's climate action efforts?

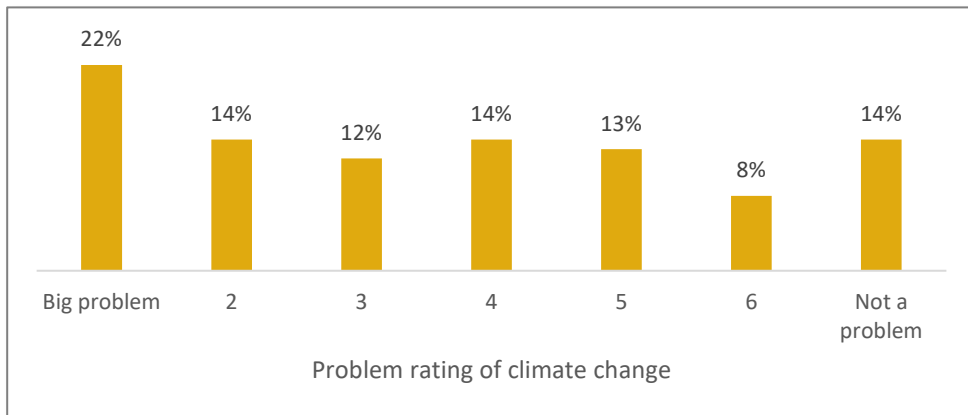


menti.com

Code: 95 95 85 3

What residents think about climate change

- 79% worry about the impacts of climate change
- 74% agree there are impacts of climate change in our region



State of the Basin: 2021 Subjective Well-being Poll

Climate Change and Our Region





basinclimatesource.ca



COLUMBIA BASIN CLIMATE SOURCE

COMMUNITIES IMPACTS ACTIONS CLIMATE SCIENCE



Hot and Cold Weather



Average Temperature



Growing Season



Average Precipitation



Extreme Precipitation

Total Precipitation (Annual)

Total Precipitation (Spring)

Total Precipitation (Summer)

Total Precipitation (Fall)

Total Precipitation (Winter)

Future Scenario

Low Global Emissions

High Global Emissions

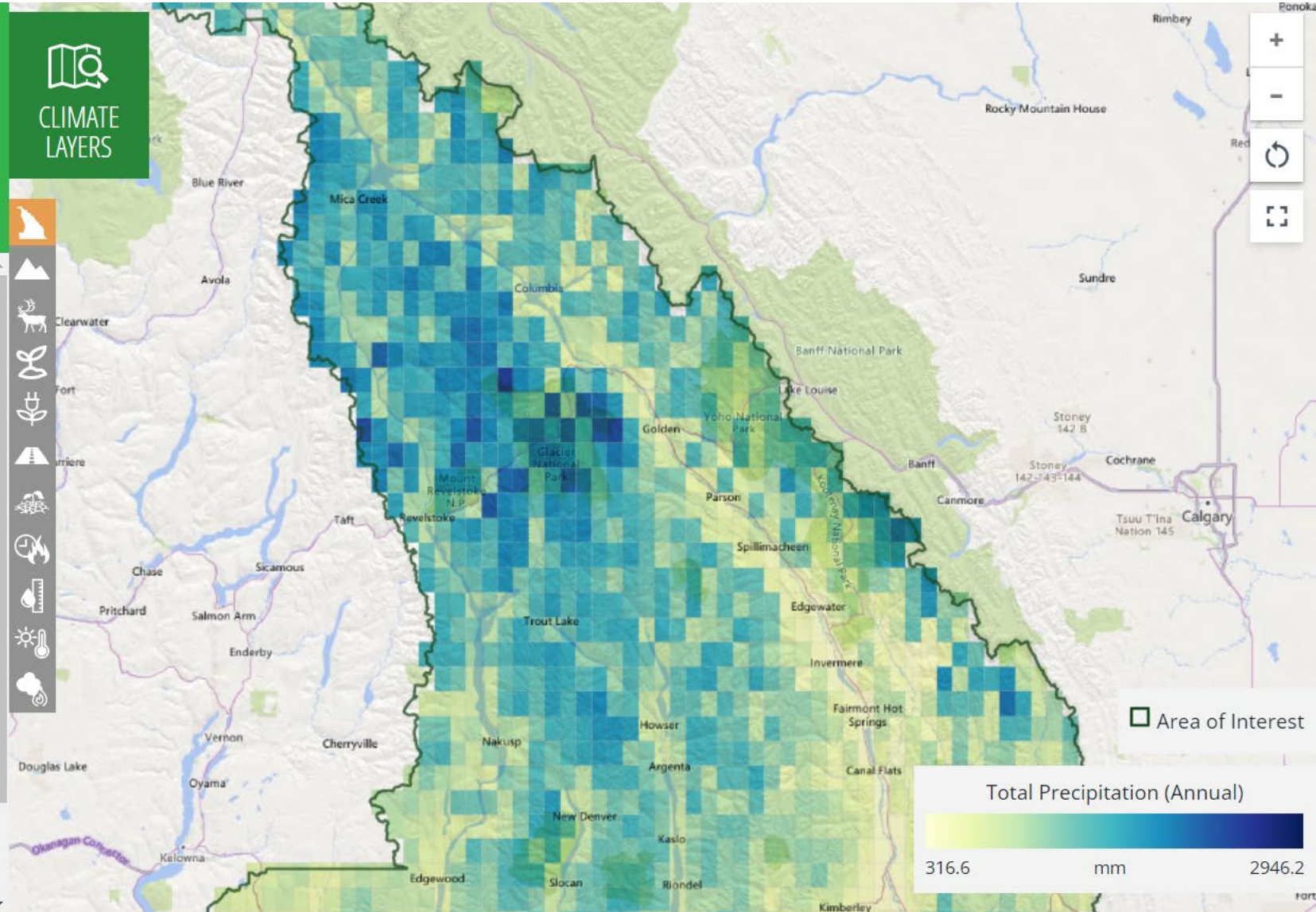
Time Period

1960s 2020s 2030s 2040s 2050s 2060s 2070s 2080s

Model Range



CLIMATE LAYERS







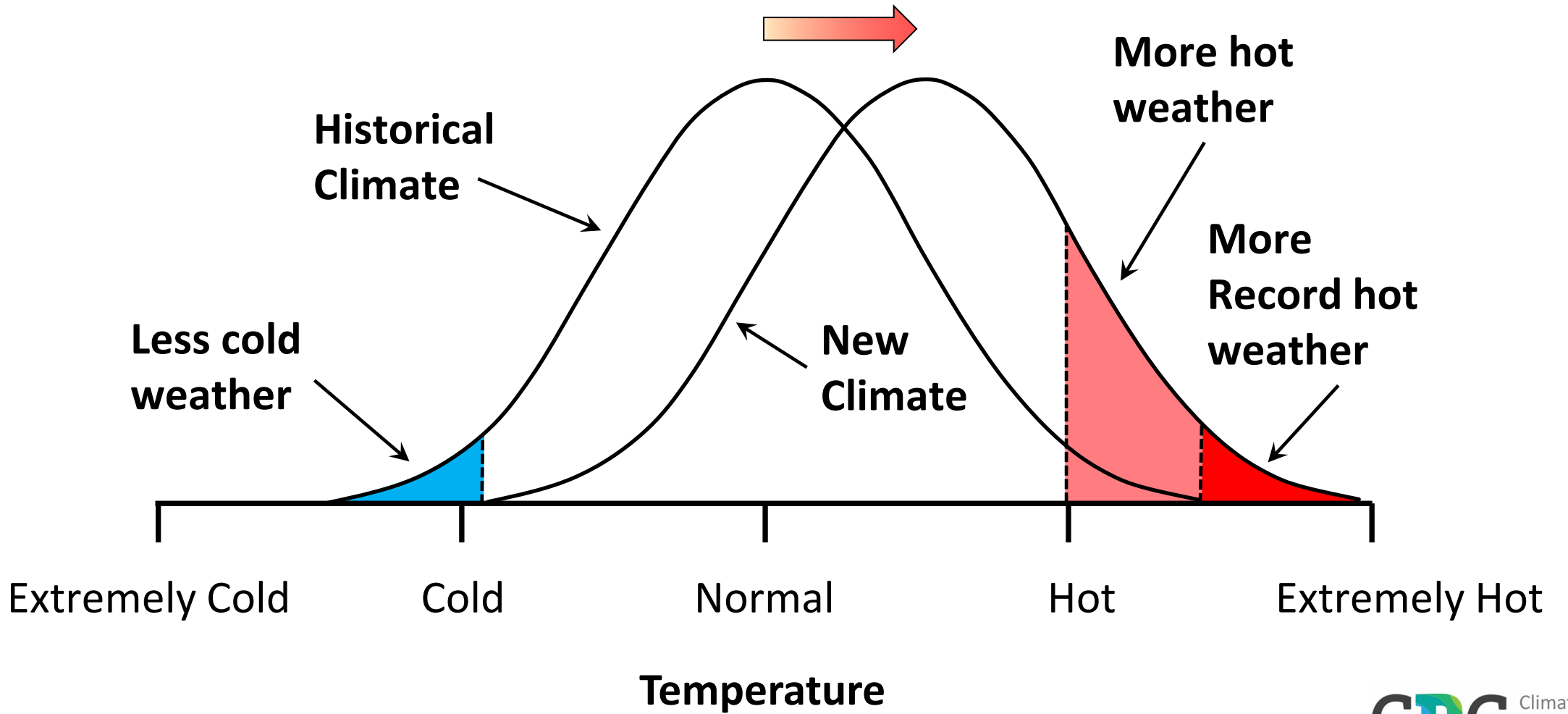
Total Precipitation (Annual)

316.6 mm 2946.2



Climate Change to Date

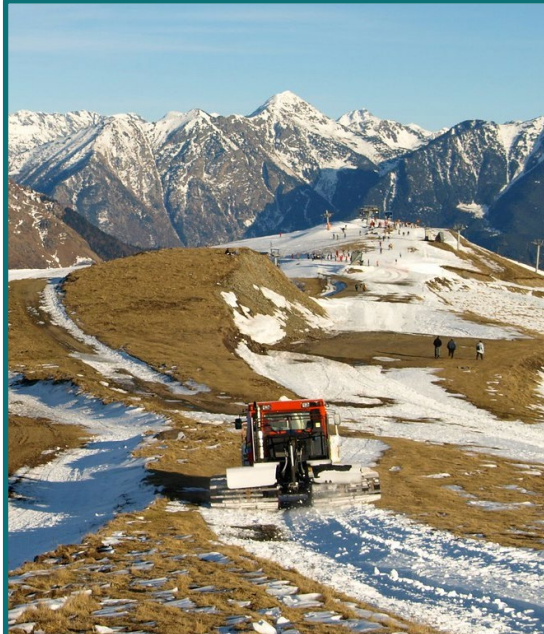
- Since the 1960s:
 - Mean temp  by 1.5-1.7°C
 - Summer precip  by 9-20 mm
 - Winter precip  by 3-15 mm
 - Number of heat waves  by 1.5-2.5



Climate Change Projections



Hotter, Drier Summers



Warmer, Wetter Winters



More Extreme Weather

Climate Change Projections

- Menti.com Code: 5970 1817



Climate Change and Local Governments



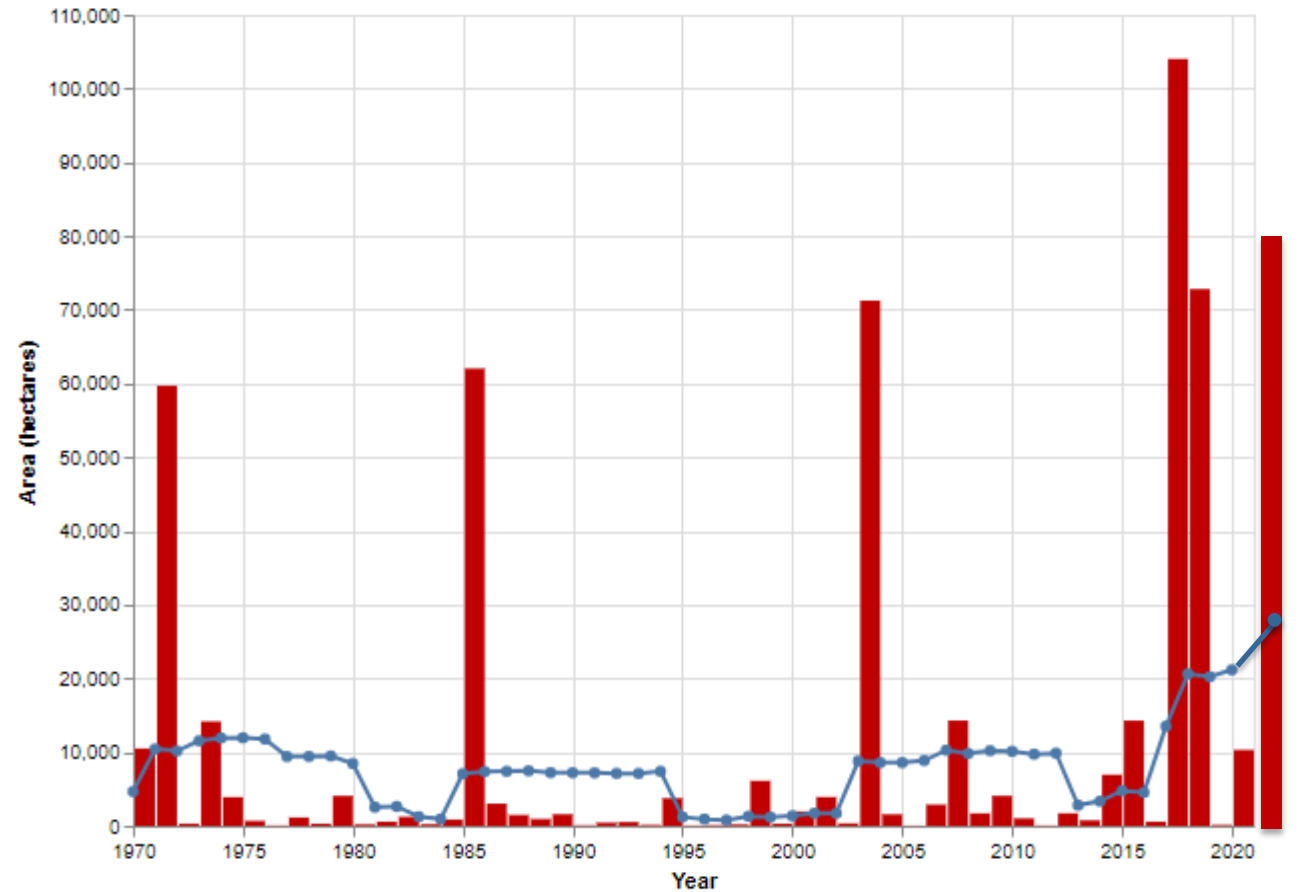
Streamflow



Catamount and North Star Glaciers – 1984 – 2021
Data Source: Bevington and Menounos, 2022

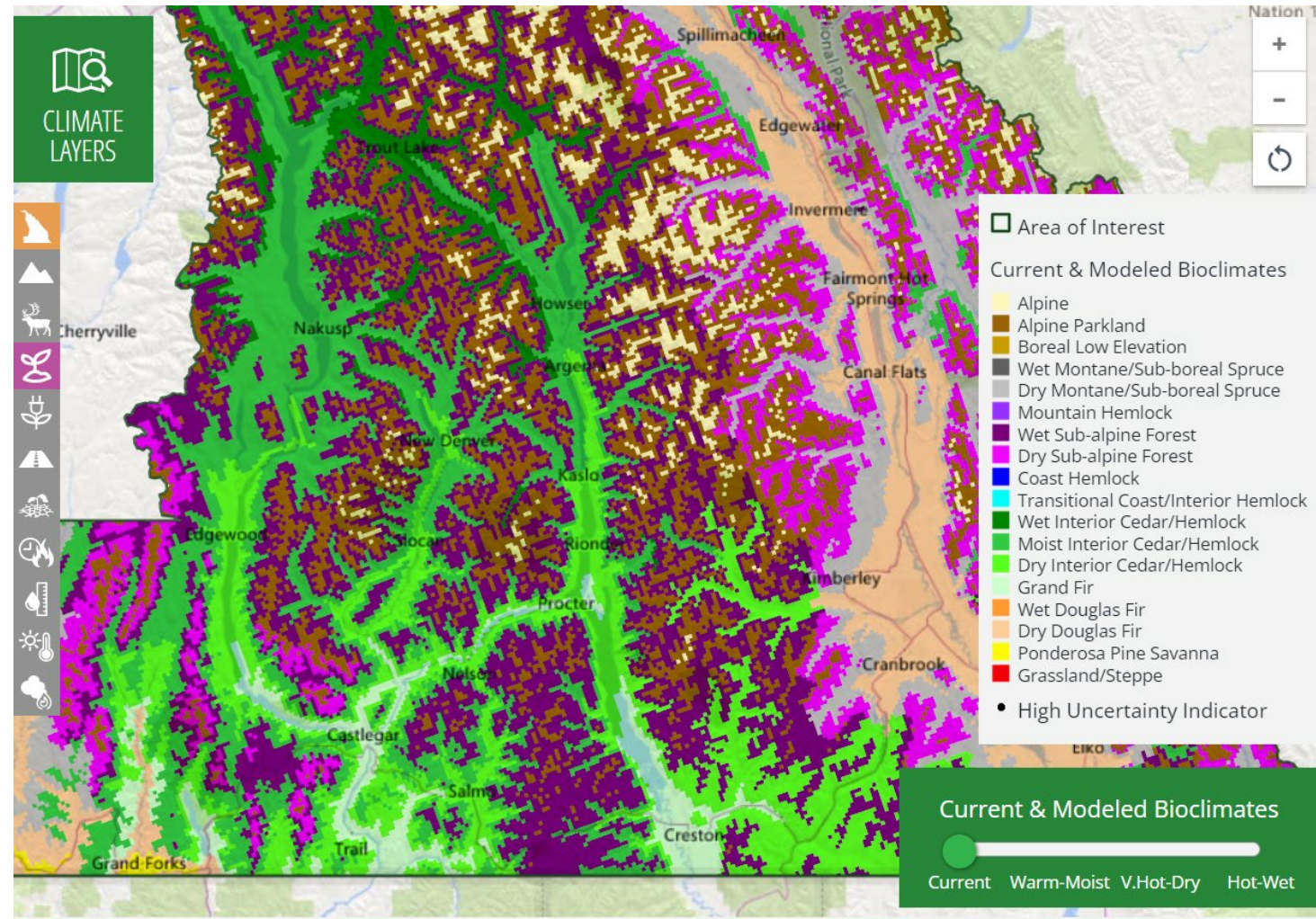
Wildfire

Figure 1: Area burned by wildfires in the Columbia Basin-Boundary (1970-2020), with a 10-year average applied



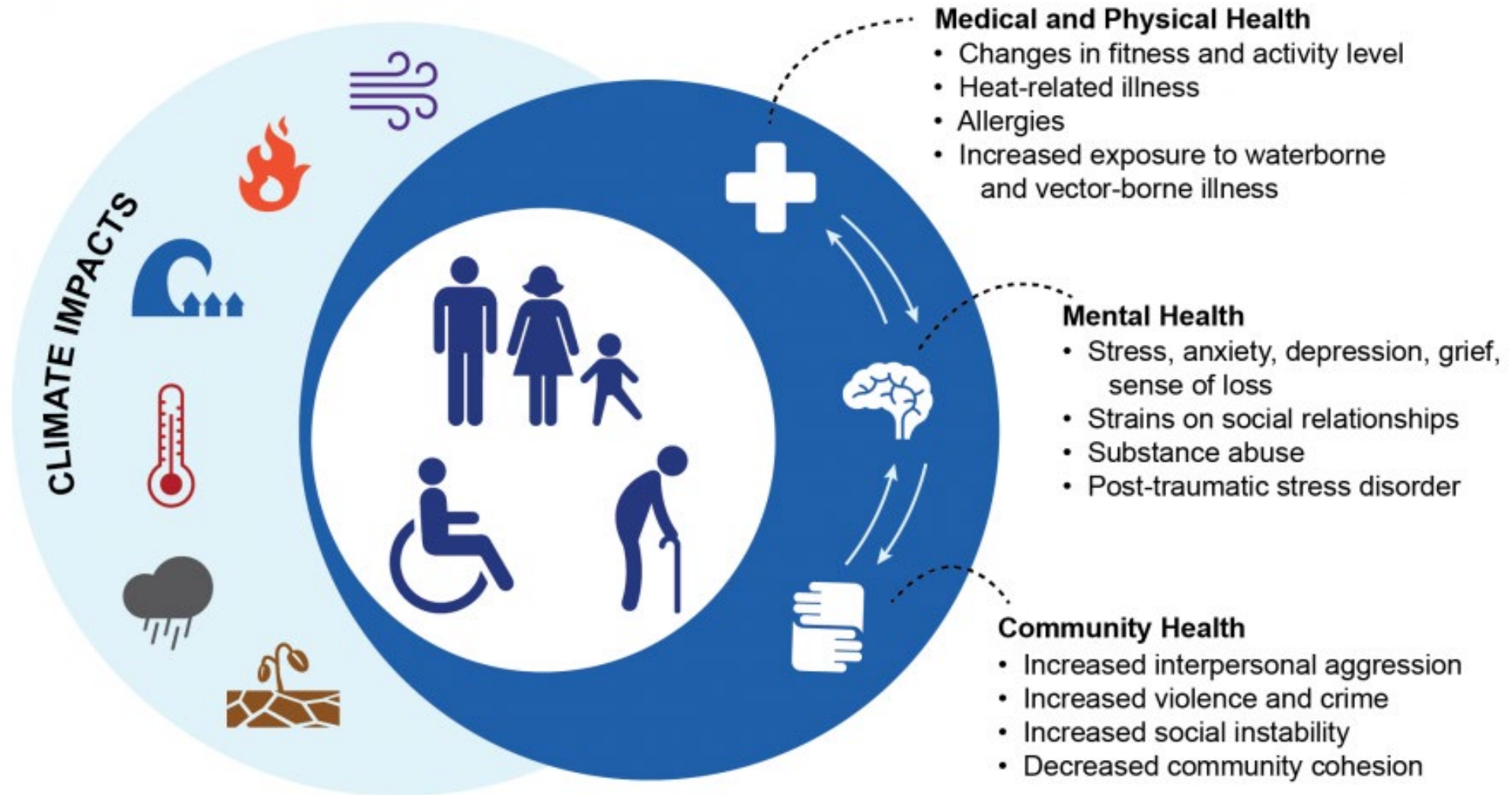
Data Source: Government of British Columbia, 2021

Ecosystems



Data Source: Greg Utzig (Kootenay Resilience), 2012

Climate Change and Human Health



Vulnerability factors to climate-related health impacts

Exposure: How much a person comes in contact with climate-related hazards

Sensitivity: Age, pre-existing health conditions, social & economic conditions

Capacity to adapt:
Ability to avoid, prepare for, and cope with exposure & sensitivity

A person is sitting on the ground in an urban setting, looking down with their hands clasped. They are wearing a grey hoodie and blue pants. To their left is a backpack and a white cup. The background shows a building with large windows and a glass door. The scene is dimly lit, suggesting dusk or dawn.

Climate change impacts
vulnerable and marginalized
populations first and the worst



2021 Heat Dome Event

526 heat –related
deaths between
June 25 - July 1, 2021

Image Date: June 27, 2021

Source: NASA

Wildfire: Rising Cost of Reaction



Sample from BC Wildfire Averages			
Year	Number of Fires	Hectares Burned	Total Cost of Fighting Fires (millions)
2020	670	14,536	\$193.7
2019	825	21,138	\$182.5
2018	2,117	1,354,284	\$615.0
2017	1,353	1,216,053	\$649.0

<https://www2.gov.bc.ca/gov/content/safety/wildfire-status/about-bcws/wildfire-statistics/wildfire-averages>

Adverse Economic Impacts on Kootenay Rockies Tourism Industry

Indicator	Survey Average	Population Estimate
2017		
Total sales in 2017 (\$)	\$ 1,223,000	\$ 671,871,000
Loss in total sales 2017 (\$)	\$ 69,940	\$ 38,425,000
# of employees laid off (persons)	0.88	483
Lost Payroll (\$)	\$ 4,990	\$ 2,741,000
2018		
Expected Lost Total Sales (\$)	\$ 11,980	\$ 6,577,000

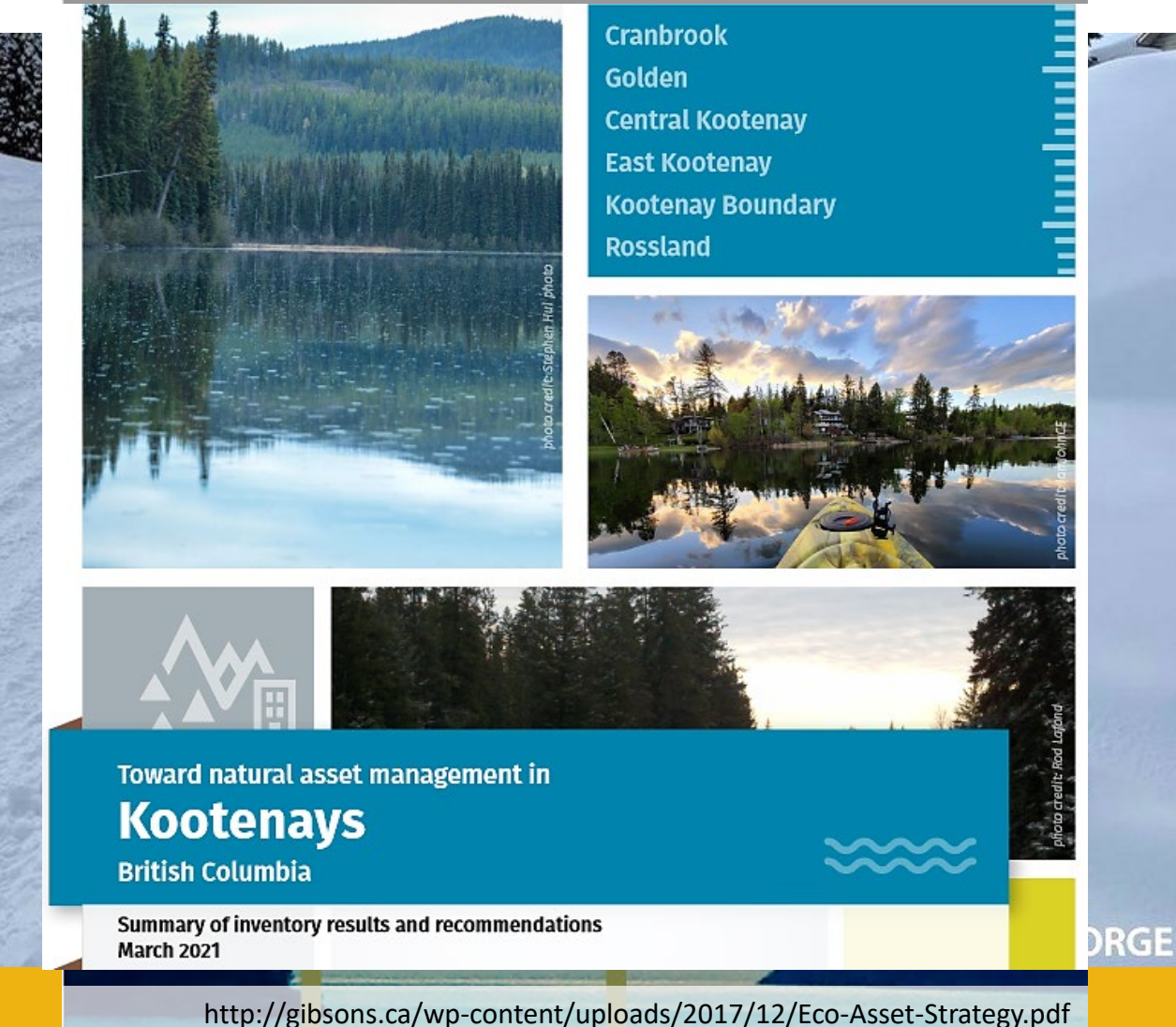
<https://www.krtourism.ca/wp-content/uploads/2018/10/Wildfire-Recovery-Survey-2018.pdf>

Insurance losses from the wildfire that wiped out most of Lytton, B.C., have surged to \$102 million.

<https://www.cbc.ca/news/canada/british-columbia/lytton-debris-removal-march-8-2022-1.6377628>

Infrastructure and Services

- Changing climate = rising costs
- Take advantage of growing number of options



Cranbrook
Golden
Central Kootenay
East Kootenay
Kootenay Boundary
Rosland

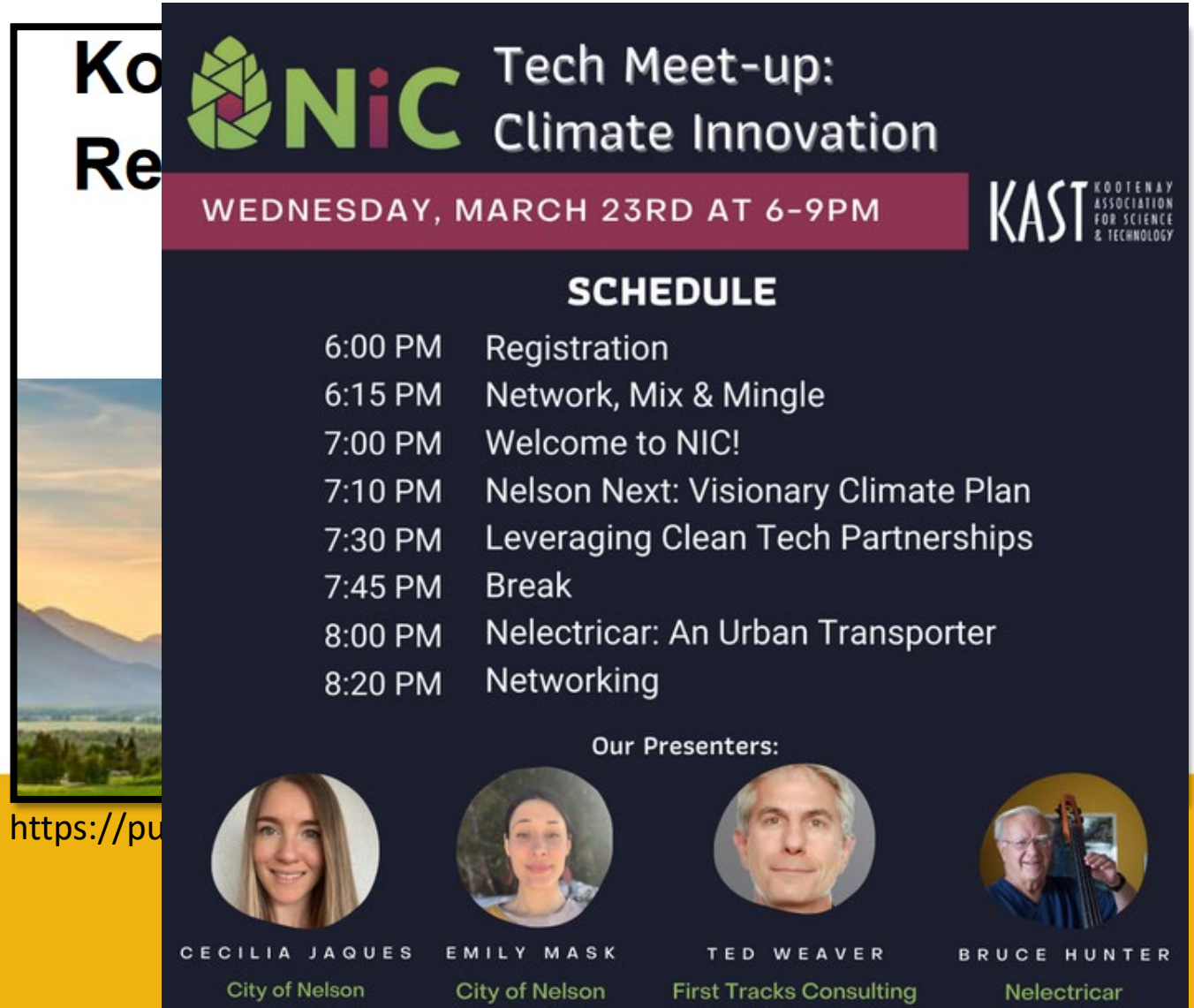
Toward natural asset management in
Kootenays
British Columbia

Summary of inventory results and recommendations
March 2021


<http://gibsons.ca/wp-content/uploads/2017/12/Eco-Asset-Strategy.pdf>

Local Business Sector

- Disaster preparation and economic resilience
- Support new opportunities and ideas



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Re

 **Tech Meet-up:
Climate Innovation**





WEDNESDAY, MARCH 23RD AT 6-9PM

KAST KOOTENAY
ASSOCIATION
FOR SCIENCE
& TECHNOLOGY

SCHEDULE

6:00 PM	Registration
6:15 PM	Network, Mix & Mingle
7:00 PM	Welcome to NIC!
7:10 PM	Nelson Next: Visionary Climate Plan
7:30 PM	Leveraging Clean Tech Partnerships
7:45 PM	Break
8:00 PM	Nelectricar: An Urban Transporter
8:20 PM	Networking

Our Presenters:

			
CECILIA JAQUES City of Nelson	EMILY MASK City of Nelson	TED WEAVER First Tracks Consulting	BRUCE HUNTER Nelectricar

<https://pu>

Actions, Examples, and Solutions

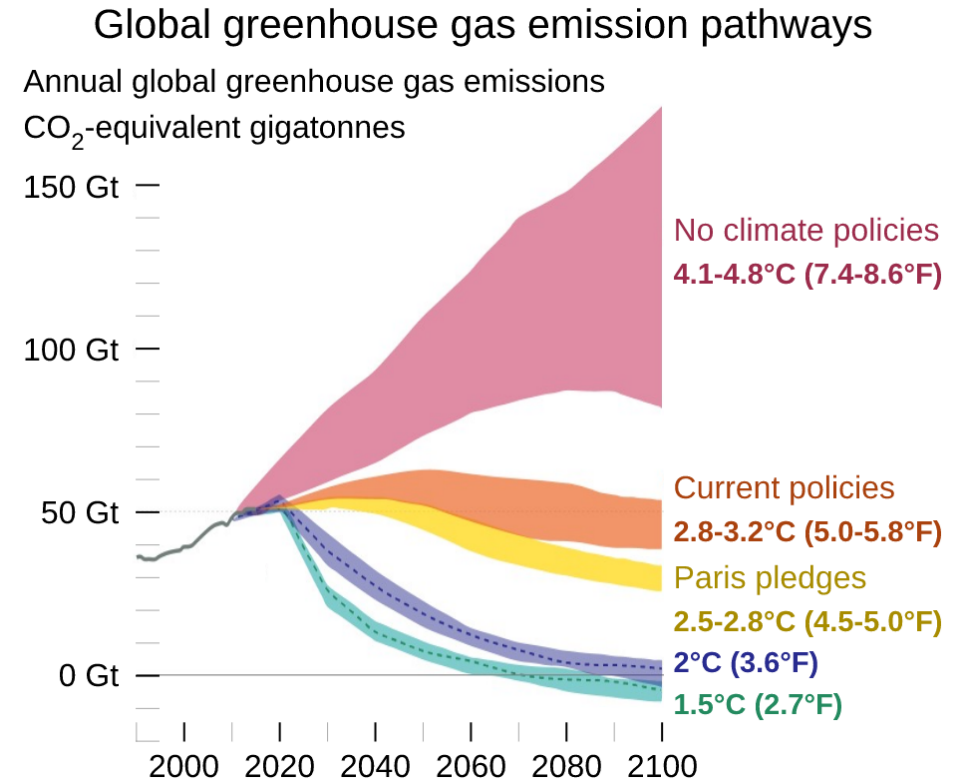
The Call to Action

“The cumulative scientific evidence is **unequivocal**: Climate change is a threat to human well-being and planetary health. Any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all.”

IPCC, 2022

The Call to Action

- 2020-2030 a critical decade for action
- Need to reach net-zero by mid-century
- Global goal to limit warming to 1.5-2°



Hannah Ritchie and Max Roser (2017)

We need more actions, not perfect actions!

- Take the “Yes! What’s Next?” approach to solutions
- Prioritize climate action
 - Clear prioritization by community leadership is essential
 - Plan(ning) for continuous improvement
 - Incentivize improvements through bylaws, taxes, projects, and other tools
- Lead by (creative) example:
 - Climate proofing local government services, infrastructure, and policies
 - Building green infrastructure
 - Electrifying fleets

Guiding Principles – Collaborate

- Work with
 - Local business and industry
 - Residents
 - Other communities
 - Post-secondary institutes
- Achieve economies of scale
- Learn from each other



ELECTRIC BUSES AT OUR ELK VALLEY MINES REDUCE ENERGY USE AND EMISSIONS

February 10, 2020



action to combat climate change

ssions by improving energy efficiency, implementing low carbon technologies and ocate with governments for equitable and effective carbon pricing policies to 1d sectors.

While we have contributed to each of the SDGs, our current Sustainability Strategy also aligns strongly with several SDGs. These are closely linked with our core competencies as a sustainability leader in the mining industry.

Specific alignments between our Sustainability Strategy goals and SDG 13 are:

STRATEGIC PRIORITY AND RELATED GOALS		RELATED UN SDG GOALS & TARGETS
Priority	Be a carbon neutral operator by 2050	SDG 13: Take urgent action to combat climate change and its impacts
Goal	Reduce the carbon intensity of our operations by 33% by 2030.	13.2 Integrate climate change measures into national policies, strategies and planning

A group of people are sitting around a table in a meeting room. There are laptops open in front of them. A large potted plant is visible in the background. The scene is dimly lit, suggesting an indoor office environment.

Improving Collaboration

Climate change can be a polarizing issue that makes it challenging to collaborate across difference

Courageous Dialogues research project exploring strategies to move beyond polarization

Guiding Principles – Take a "Systems" Approach

- Involve the whole organization and consider the whole community
- Integrate climate action to achieve "Low Carbon Resilience"
 - Co-benefits
- Make every project a climate project
 - Climate Action Portfolio
- Insurance against risk



Guiding Principles – Embrace Diversity and Aim for Equity

- Involve diverse stakeholders to generate innovative solutions and increase buy-in
- Ensure no one is left behind



Explore more solutions

COLUMBIA BASIN CLIMATE SOURCE

COMMUNITIES IMPACTS ACTIONS CLIMATE SCIENCE

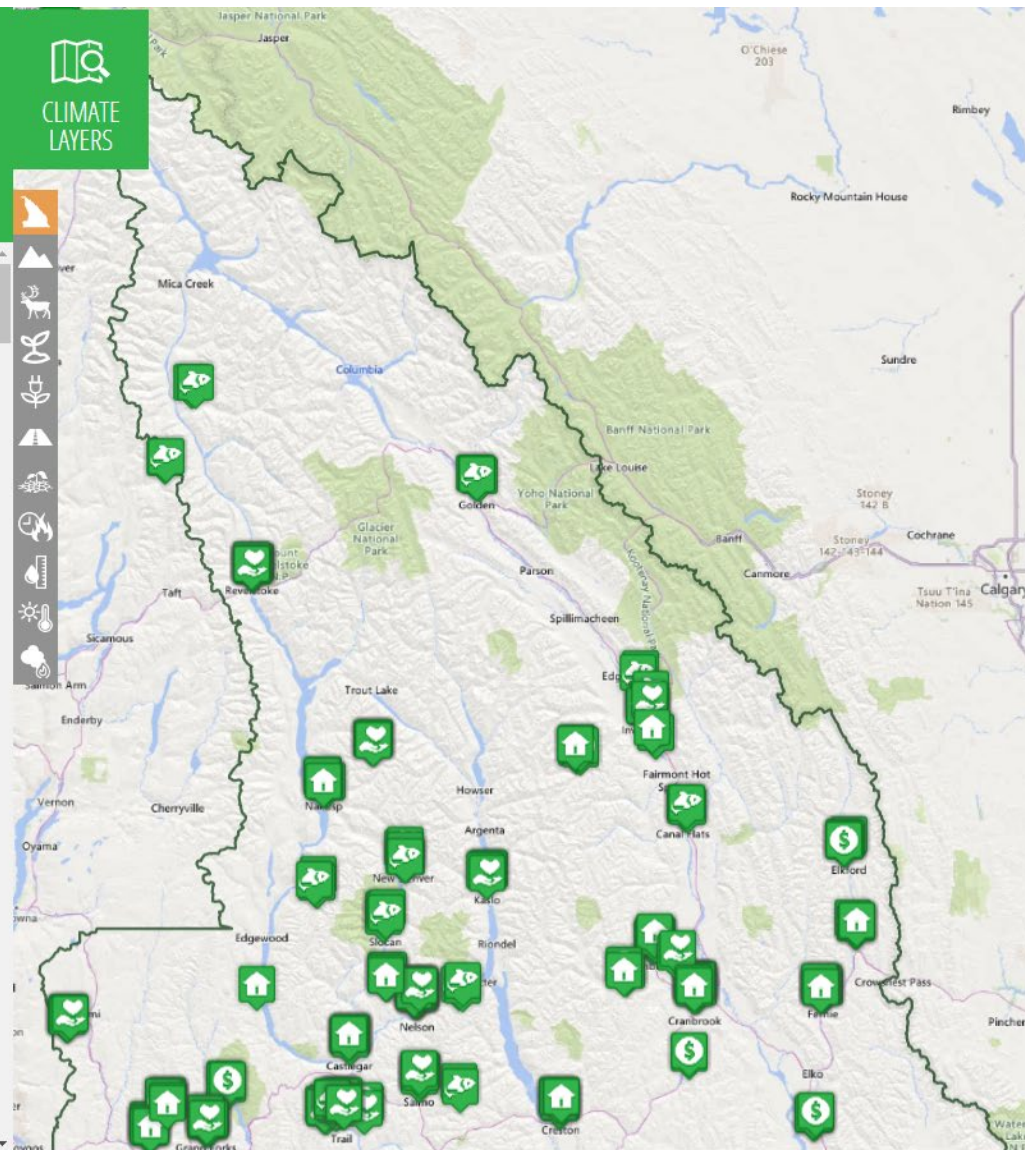
CLIMATE LAYERS

Actions

Here's how local residents, local governments, community organizations and businesses are taking climate action in the Basin.

All Locations Case Studies & All Impacts

100% Renewable Kootenays Plan	Accelerate Kootenays	Active Transportation Network Plan
Arrow Lakes Environment Stewardship	Arrow Lakes Grape Growers	BC Parks Climate Change Lens
Boundary region EV charging	Build Energy Smart	Bullfrog Action Team



The State of Climate Action (SoCA) is a reporting framework that aims to:

- ▶ Help the RDCK track the progress towards its climate action objectives and targets;
- ▶ Evaluate and improve its climate action initiatives and efforts;
- ▶ Maintain public transparency on these processes; and,
- ▶ Demonstrate climate action leadership.

By tracking and reporting on climate action, the RDCK will also be able to find ways to streamline its efforts, achieve co-benefits through integration and collaboration between projects and initiatives, and optimize the use of time and resources.

The region's climate action goals, objectives, targets and indicators are grouped into 10 pathways. These pathways fall under two overarching categories:

1 Reducing Risks of Climate Change (Climate Mitigation)	2 Building Climate Resilient Communities (Climate Adaptation)
<ul style="list-style-type: none"> • LAND USE & PLANNING • TRANSPORTATION & MOBILITY 	<ul style="list-style-type: none"> • WATER SUPPLY • FOOD SUPPLY & AGRICULTURE

HOW TO READ THIS DOCUMENT

The new State of Climate Action format is designed as levels –

- Level 1** (page 1 and 7) is a quick snapshot of pathways, goals and the average score for each of the 10 pathways.
- Level 2** (pages 3-6 & 8-12) provides more detail with objectives, indicators, whether the RDCK has controls or influence and an update. This update may explain the level of change for 2021 or why an indicator hasn't changed.
- Level 3** (to come) will provide links for more information and ways to get involved. This will be included in the online version.

How did we get the score?
First we looked at each indicator and determined whether there was progress (green - 2), limited progress (yellow - 1), or no progress (red - 0). Once all indicators within a given pathway were scored an average was taken to provide the overall score for that pathway.



Why so red for 2021?
While the RDCK is ambitious in its climate action, many of the



Closing Message



All communities have
made progress that they
can build on



Our region's unique
strengths can be used to
boost pace and impact



NOW is the time to lead

Thank you

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