Bringing climate data into local decision making;

how it supported Climate Change Adaptation and Environmental Emergency Preparedness Workshops in Eeyou Istchee

Session: OTH37- Data Developments: Processing, Providing, and Practical Application of Climate Data in the North

By: Pernilla Talec, Manager of Climate Change

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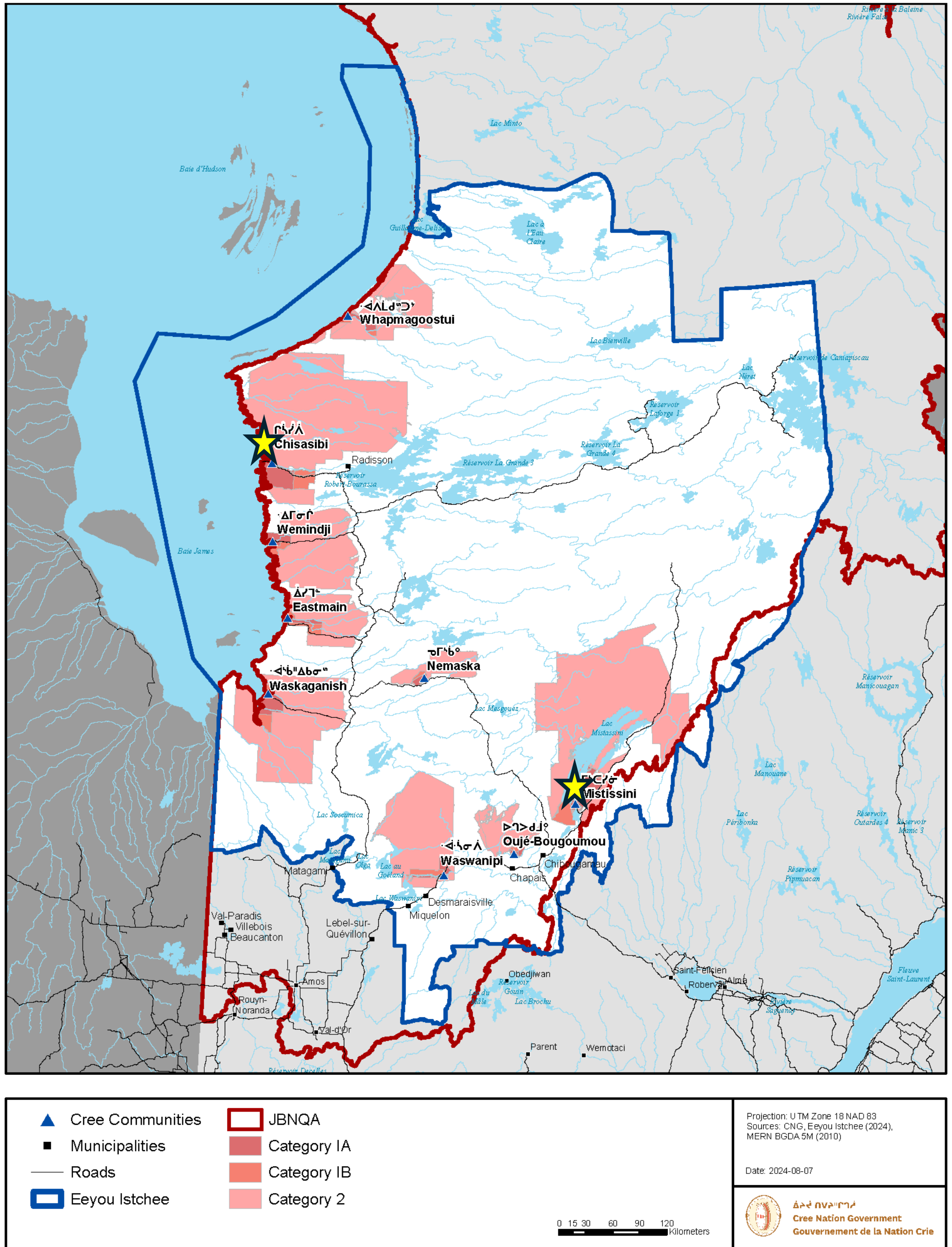
Grand Council of the Crees (Eeyou Istchee)
Grand Conseil des Cris (Eeyou Istchee)

ᐄᔨᔫ ᑎᐯᔨᐦᒋᒉᓲ
Cree Nation Government
Gouvernement de la Nation Crie

Eeyou Istchee

- 9 Cree Communities,
- 22,000 people
- Area: 400,000 km^2

ᐄᔨᔫ ᐊᔅᒌ
The Eeyou Istchee Territory



Climate Change Adaptation and Environmental Emergency Preparedness Worshops

Collaboration between:

- Department of Environment and Wildlife- Cree Nation Government
- Department of Capital Works and Services- Cree Nation Government
- Cree Board of Health and Social Services of James Bay
- Canadian Center for Climate Services- ECCC
- Cambium Indigenous Professional Services

Invitees:

- Public safety officers
- Elders and Youth
- Members of the Climate Change Advisory Committee

C·I·P·S
Cambium Indigenous Professional Services

Climate Change Advisory Committee

Members:

- 11 Cree Nations
- Cree Trappers Association
- Cree Nation Youth Council
- Cree School Board
- Cree Board of Health and Social Services James Bay
- Nishiiyuu Council of Elders
- Cree Women of Eeyou Istchee Association

Mandate:

Support the Cree Nation Government and advise leadership on climate-related issues

Develop and support implementation of emission reduction, adaptation and preparedness projects, plans and strategies, locally and regionally

Engage with stakeholders to promote sustainable practices, increase knowledge, and strengthen climate resilience across Eeyou Istchee.

CLIMATE CHANGE ADAPTATION AND ENVIRONMENTAL EMERGENCY PREPAREDNESS WORKSHOP
CHISASIBI 2025
11-12-13 MARCH
DAY 1
FUTURE
RISK
BE THE VOICE OF THOSE WHO CAN'T SPEAK
WE ARE IN THIS COLLECTIVELY
THE CLIMATE IS CHANGING
IMPACTS
ARE NOTICEABLE EVERYWHERE, AFFECTING US ALL
HAPPENING NOW
GLOBALLY AND LOCALLY
WORKING TOGETHER AS A COMMUNITY AND BEYOND
YOUTH
ELDER
TO FIND SOLUTIONS
INCLUDE THE YOUNG!
ADAPTATION IS KEY PREPAREDNESS
TO LOOK AHEAD AND BE PREPARED
MODEL PROJECTIONS
RISK SCENARIOS
SERVE AS PREPARATION FOR THE FUTURE
HIGH
RANGE OF FUTURE OUTCOMES
LOW
THE FRONT LINE, WHAT WE SEE ON THE LAND
WE CAN'T KNOW THE FUTURE, BUT WE PREPARE FOR IT!
INTUITIVE
INDIGENOUS KNOWLEDGE
COMPLEMENT
IT'S ALL ABOUT PERSPECTIVES
EACH OTHER
ANALYTICAL
CLIMATE DATA
START
ASK A QUESTION
DATA
VULNERABILITY
FUTURE RISK
ADAPTATION PLAN
IMPLEMENT
MONITOR
USING THE 7 STEPS FRAMEWORK
LET'S TURN CHANGES INTO OPPORTUNITIES!
@MARIE JOELLE FOURNIER

CANADIAN CENTRE FOR CLIMATE SERVICES

- Increasing awareness and access to climate data
- Providing training and guidance
- Engaging with users to understand needs
- Developing new products collaboratively

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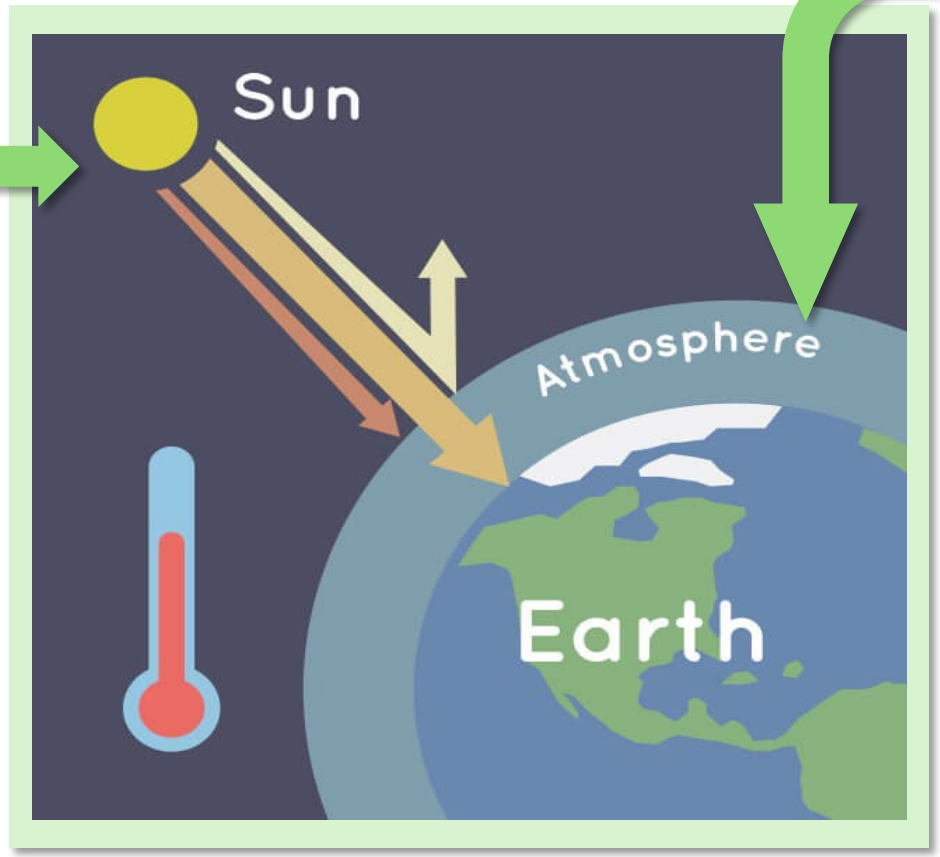
What Causes Climate Change?

How the Greenhouse Effect Works



Greenhouse gases are created by **burning fossil fuels** (coal, oil, and gas), **cutting down forests, and large-scale farming**.

Images retrieved from: What Is the Greenhouse Effect? | NASA

Flooding

More heavy rain events

Winter flooding from thaw or rain

Drought

Dry land

Low water for travel

Food Security

Changes in fish spawning

Changing migration patterns

Transportation

Shorter winter road season

Ice conditions less predictable

There are many climate impacts

Ecosystems

Shifting habitat for plants and animals

Permafrost thaw

Health

Heat illness

Mental stress

Infastructure

Damage and power outages

Poor drinking water quality

Wildfire

Damage to the community

Poor air quality

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Graphic inspiration from Climate Change Adaptation Quick Guide, UP NORTH ON CLIMATE

EEYOU ISTCHEE CLIMATE DATA

CLIMATE CHANGE ADAPTATION AND ENVIRONMENTAL EMERGENCY PREPAREDNESS WORKSHOP

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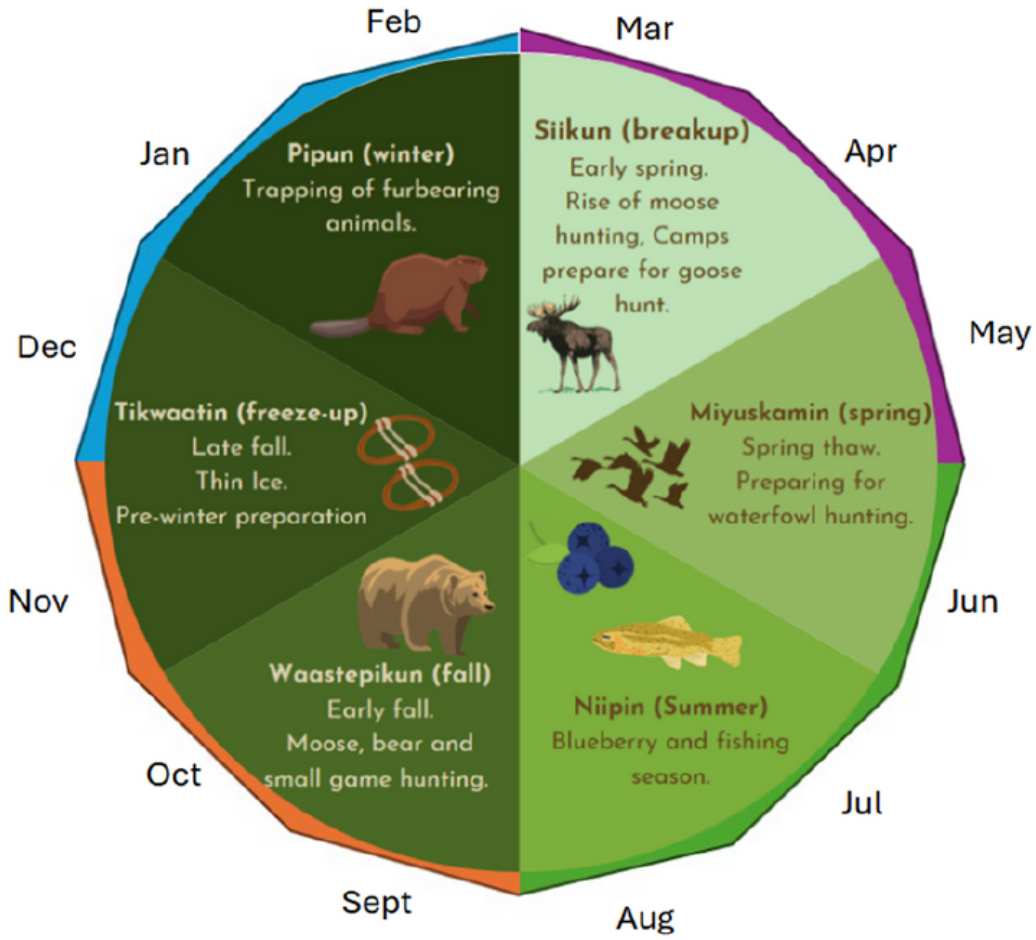
Introduction

The Canadian Centre for Climate Services worked with the Cree Nation Government, Cree Board of Health and Social Services of James Bay and Ouranos to provide select climate information for the region of Eeyou Istchee The information considers the six Cree Seasons (see figure below) as well as the 12-month calendar to facilitate a discussion on adaptation at the community level. In most cases, annual climate indices are disaggregated to the corresponding Cree season where the change will be experienced.

We know the climate is changing, thus using historical climate information alone is not sufficient to describe future climatic conditions. Climate models help us understand the range of future climates that we could experience. Where available, all data presented in this handout are from the SSP3-7.0 scenario, a high emission socioeconomic pathway in order to plan and be prepared for all of the most likely scenarios. This pathway was chosen because it represents a high emissions future that encompasses the most likely greenhouse gas emission scenarios.

*Please see page 11 of the handout for more technical information on the data



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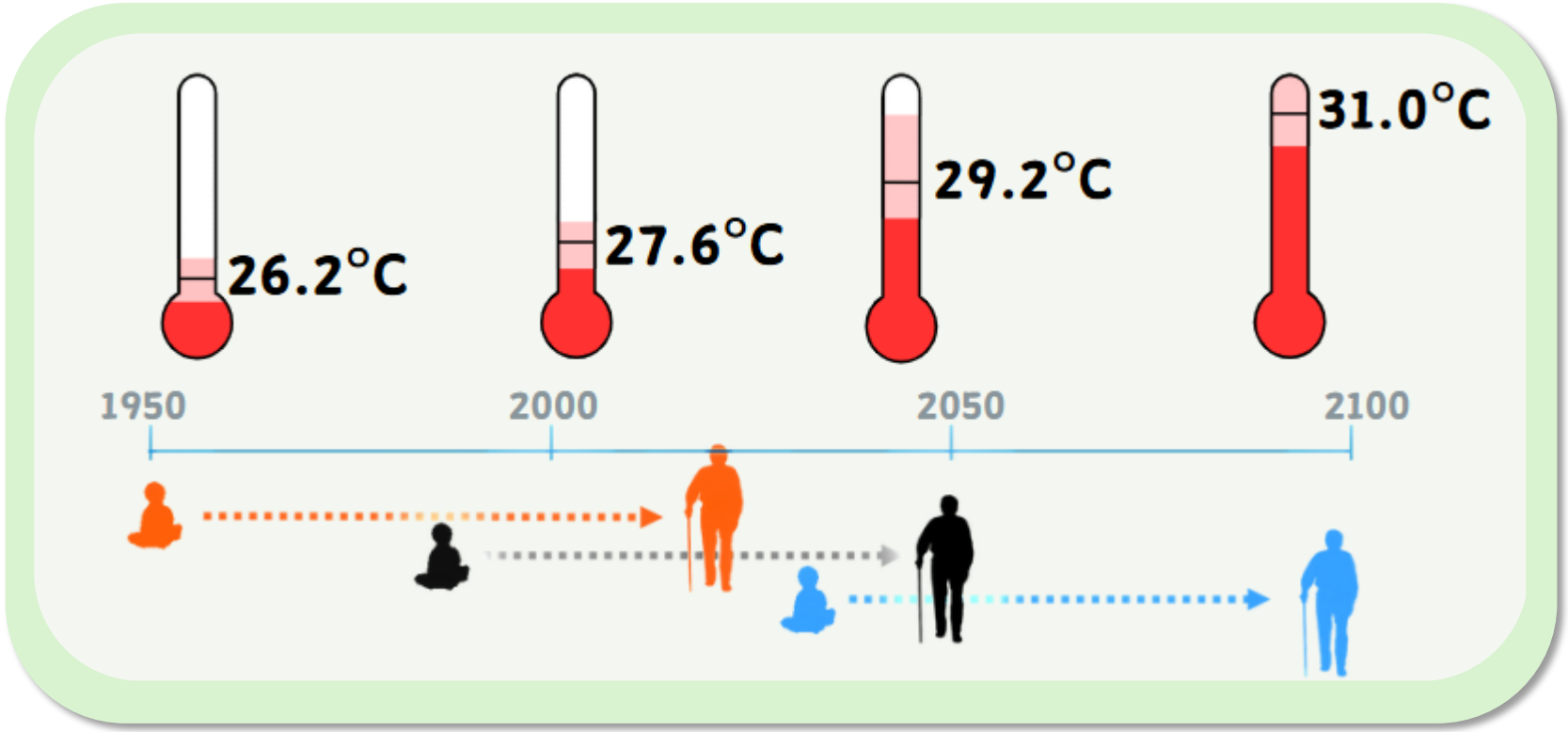
ClimateData.ca

PAVICS

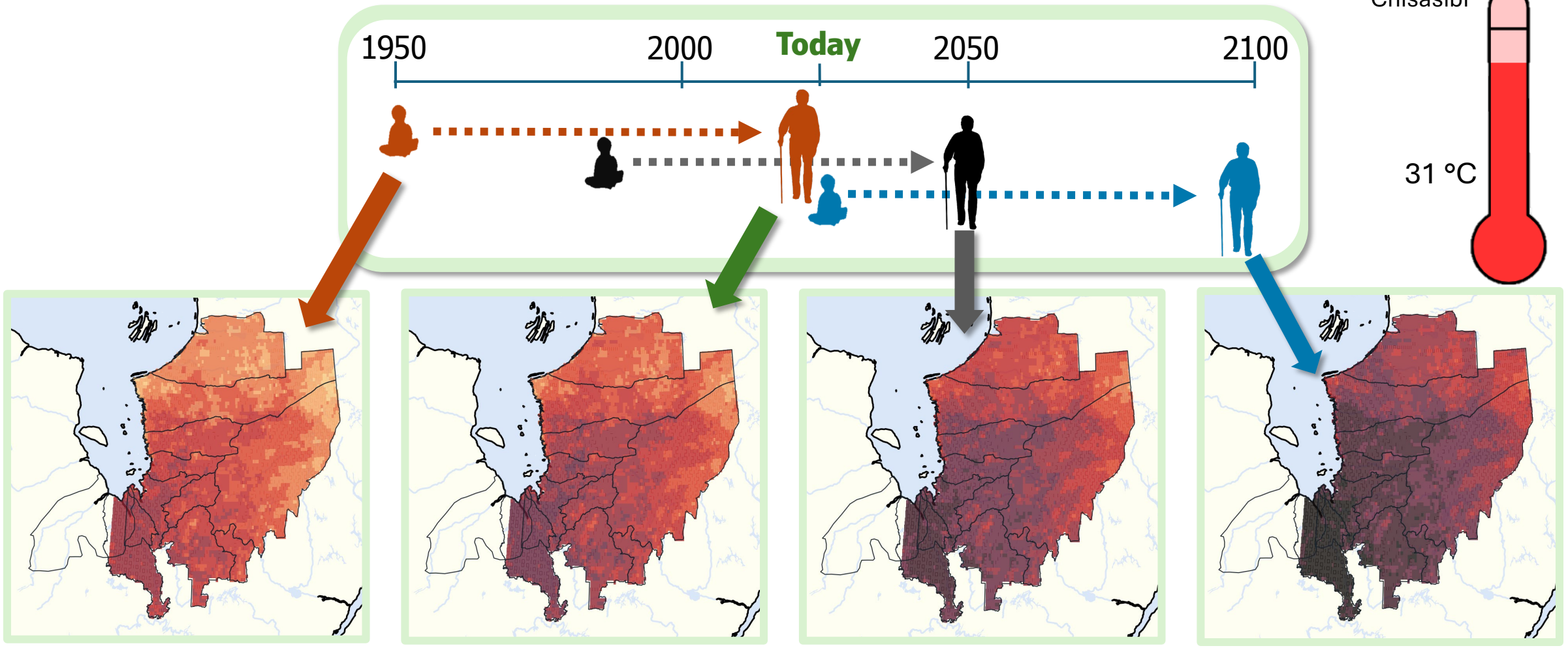
Ouranos

Generational Changes in Climate

Projections of hottest day in Chisasibi



Hottest temperature - niipin

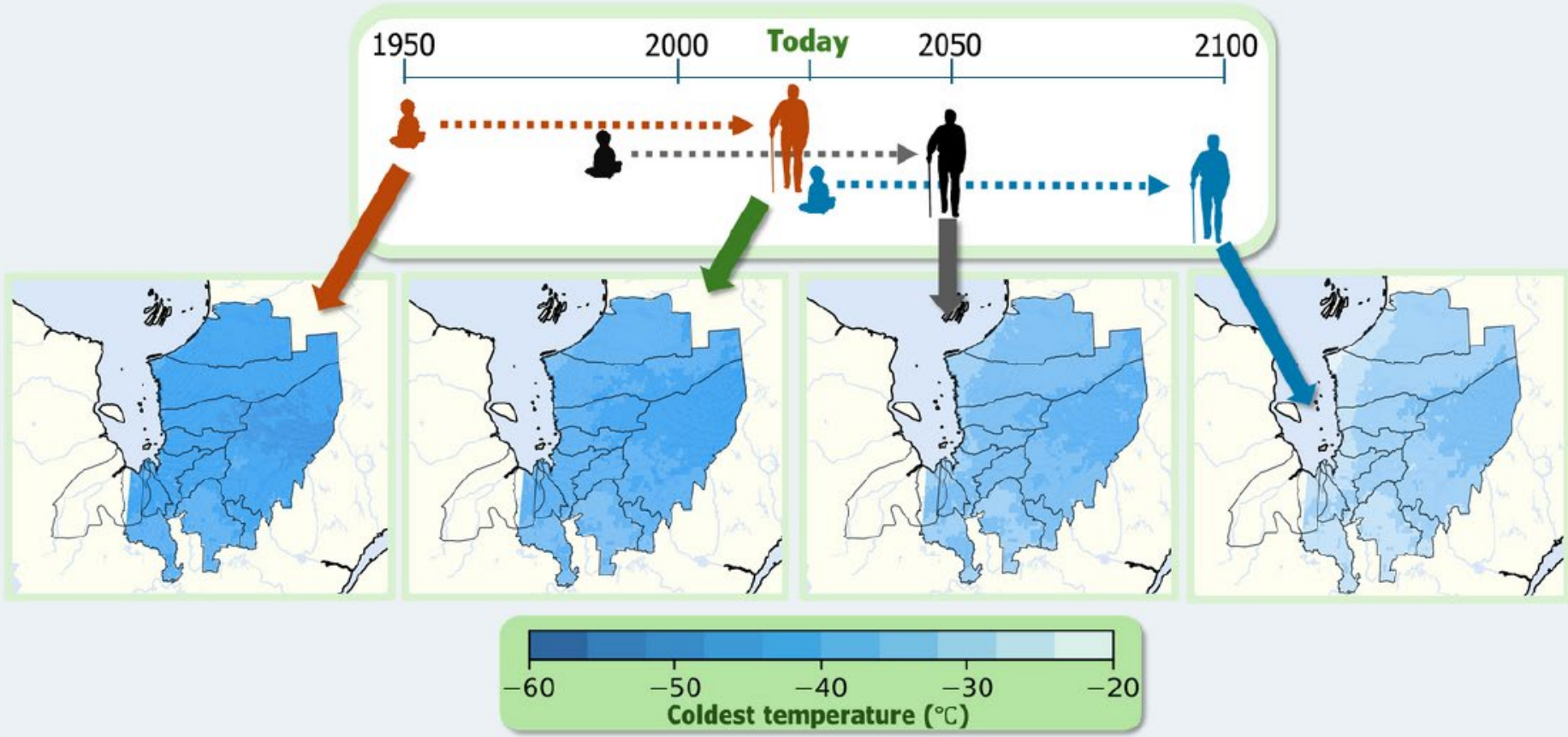


pipun (Jan/Feb)

Coldest temperature

What will change?

The coldest day of the year will get much warmer, across the region. Warmest temperatures will be on the coast, and in the southern regions.

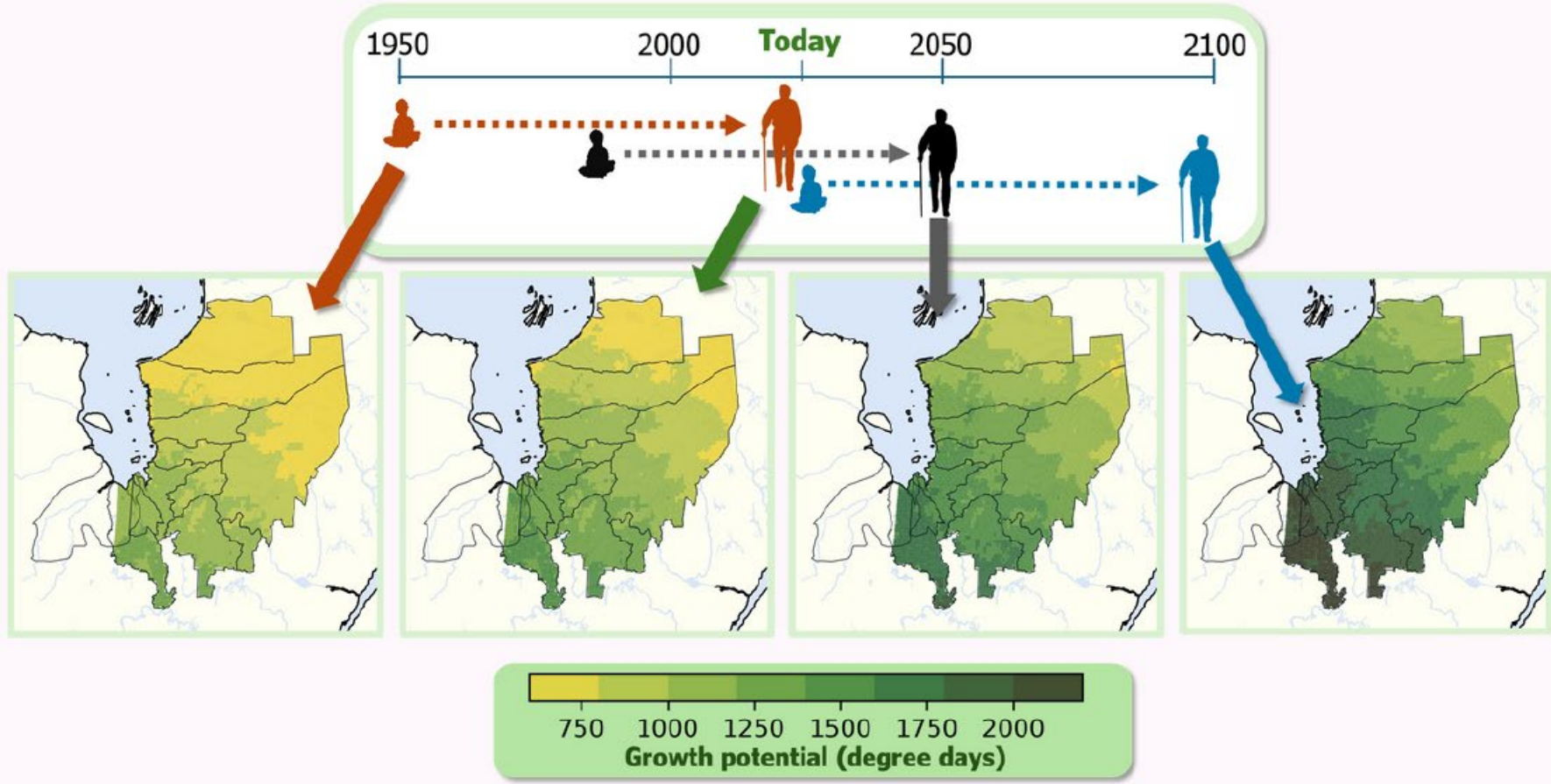


miyuskamin (May / Jun)

Growth potential

What will change?

The potential for growth is becoming more abundant and will continue to increase, approximately double compared to the past conditions.

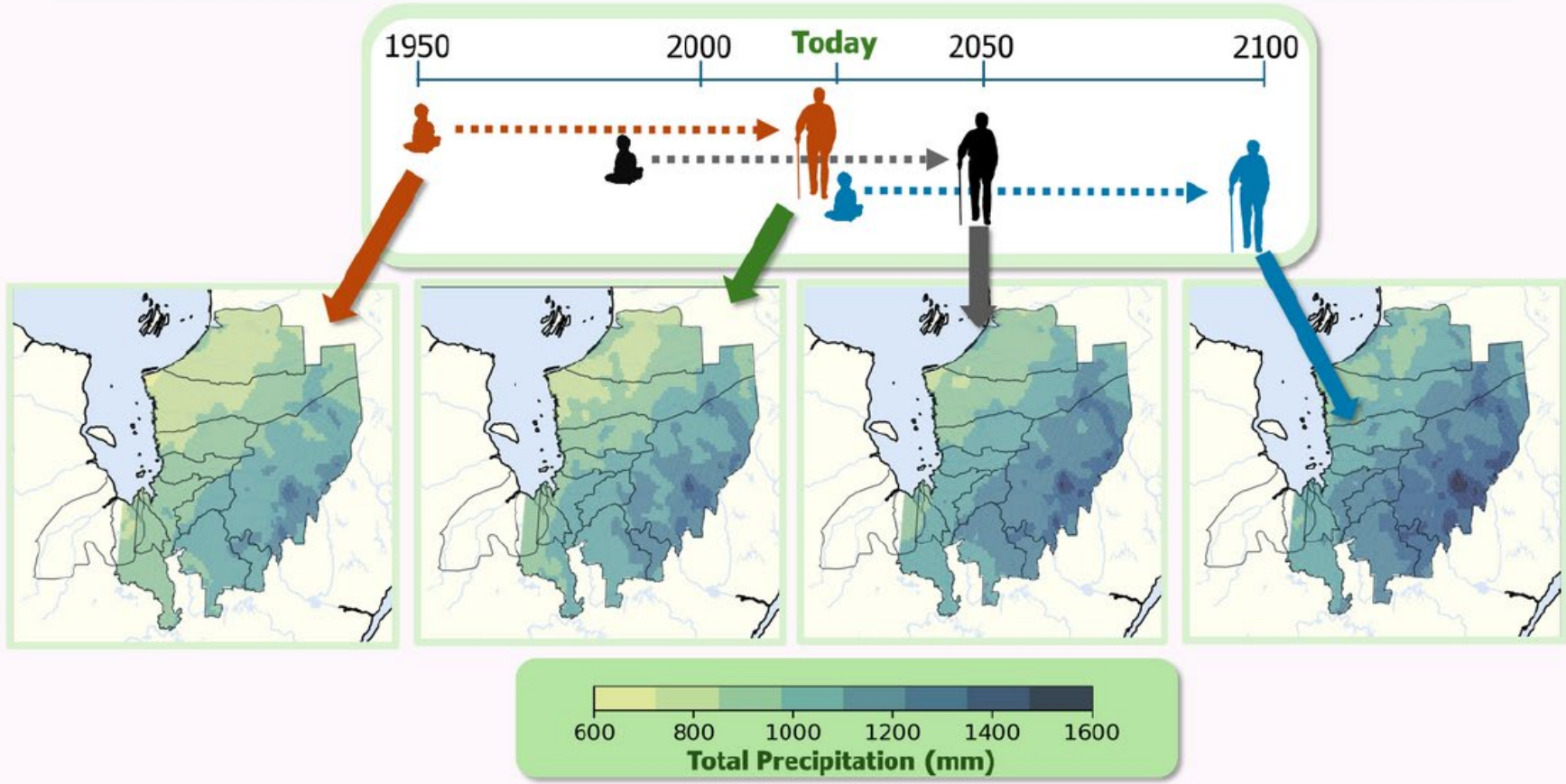


miyuskamin (May/Jun)

Total Annual Precipitation

What will change?

The total amount of annual precipitation will increase.

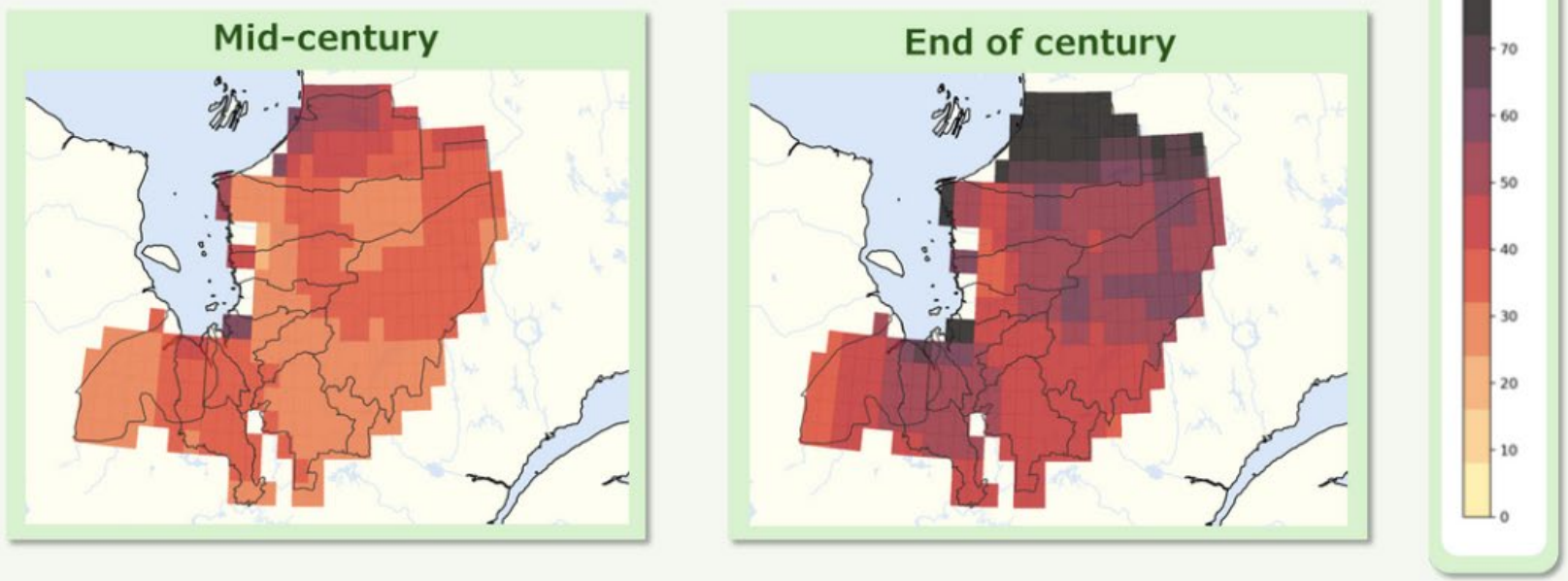


niipin (Jul/Aug)

Wildfire

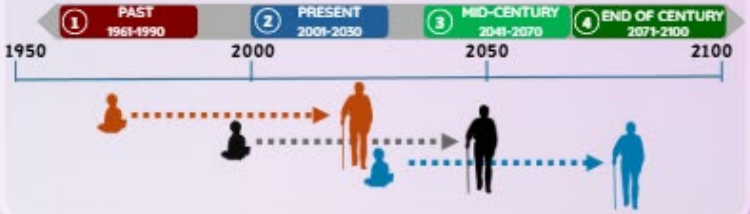
What will change?
The weather contributions to wildfire severity will show significant increase.

These maps show the percentage change in fire weather compared to the recent past.



Overview of changes in climate for Mistissini

How to read the time periods:



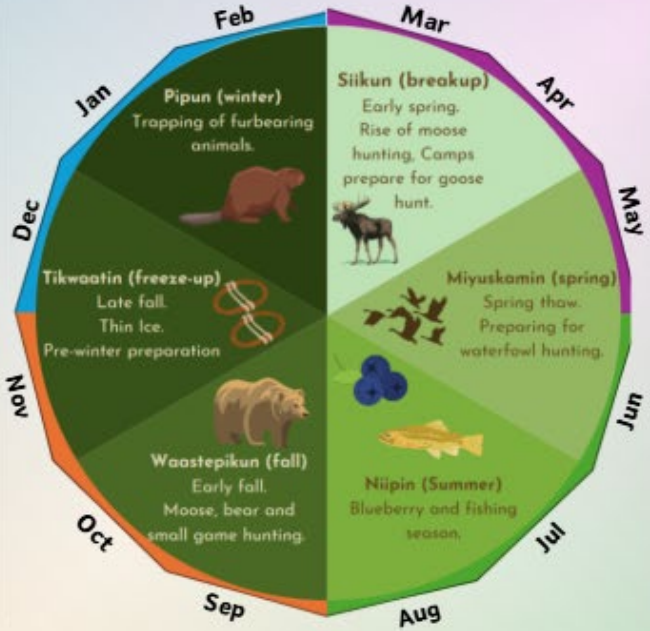
Extreme colds will be warmer

By the end of the century, the coldest night of the year will be about 9 degrees warmer than it is now. The coldest night is already 4 degrees warmer than in the 1970s.

More snow

The amount of winter snowfall will increase by 35% by the end of the century, compared to the past.

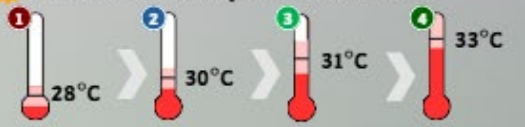
SWE = Snowfall water equivalent



Earlier last spring frost

By the end of the century, the last spring frost will occur about 2 weeks earlier than it does now. This will mean an earlier start to the growing season.

The hottest days will be hotter



Today's Elders experience the hottest day as two degrees warmer than when they were young. Today's youth will see a hottest day that's 3 degrees warmer in their lifetime.

Later first fall frost

By the end of the century, the first fall frost will be 2 weeks later compared to now.

More rainy days

Elders today see 3 more rainy days (above 10 mm) than in their youth, while today's youth will face 4 more rainy days by the time they become Elders.

Rainiest day will be wetter

The rainiest day will be about 15% wetter than it is now by the end of the century. This could contribute to more flooding.

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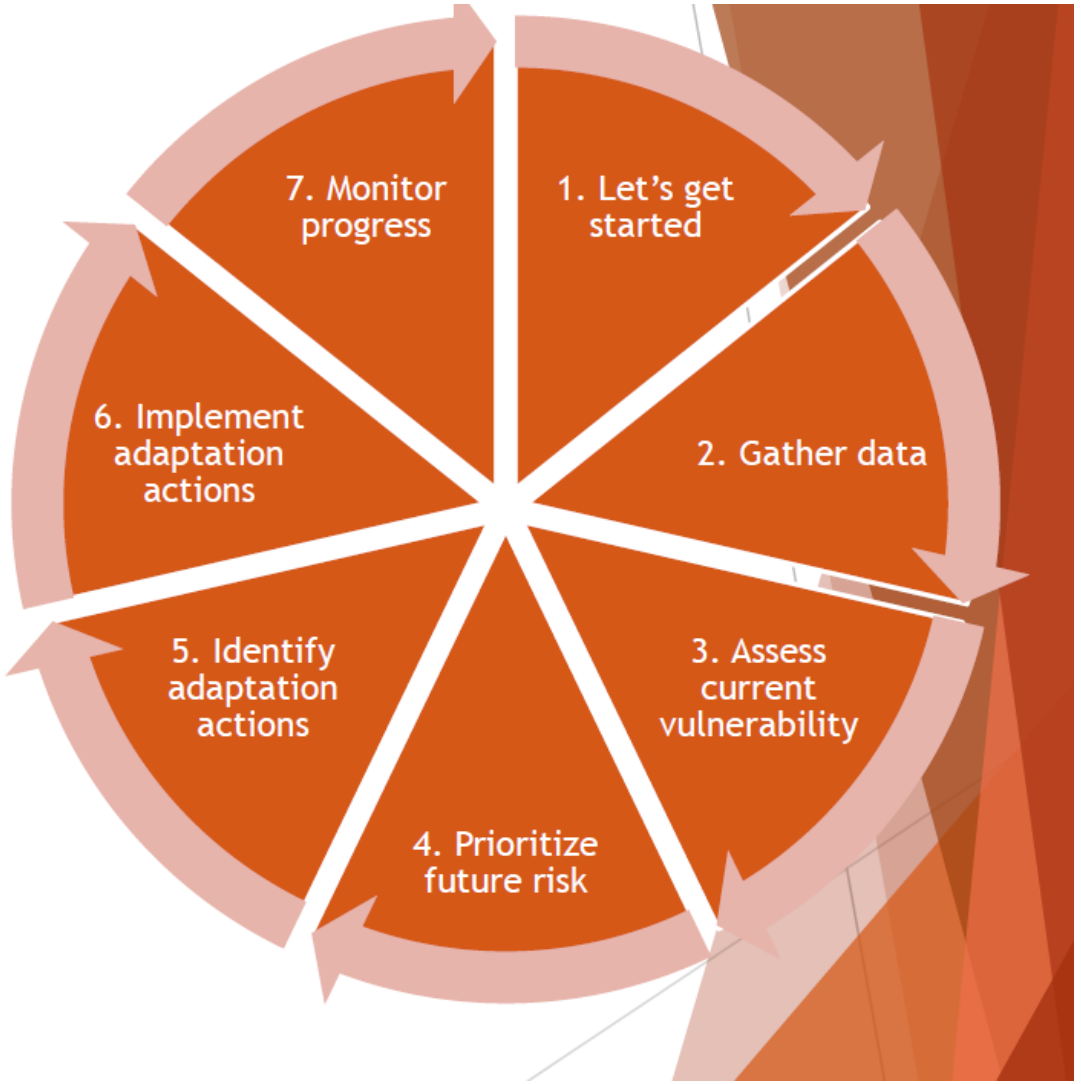
Climate Change Adaptation plan Framework

- Step 1: Let's get started
- Step 2: Gather data
- Step 3: Current vulnerability
- Step 4: Prioritize future risk
- Step 5: Identify adaptation options
- Step 6: Implement adaptation actions
- *Step 7: Monitor progress*



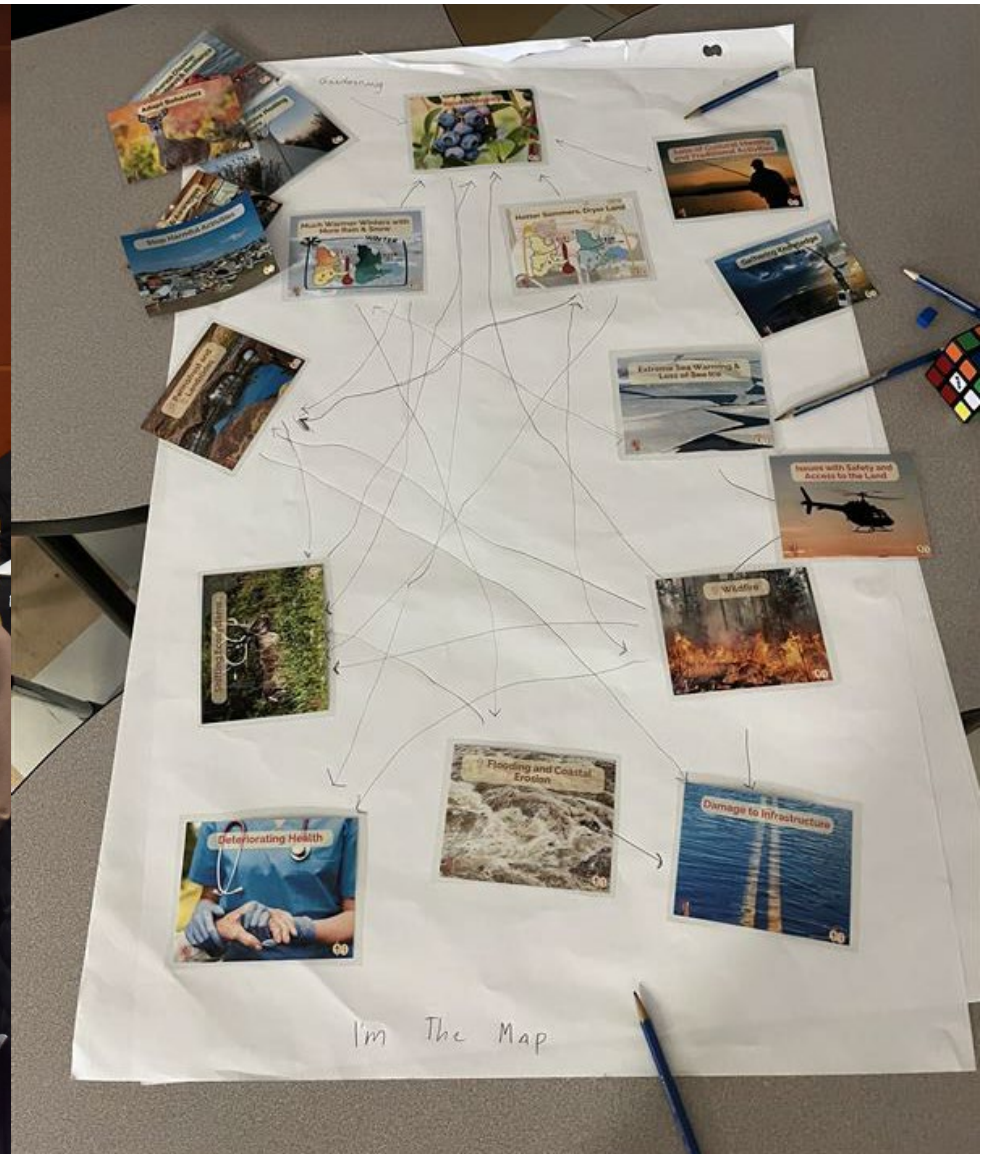
C·I·P·S
Cambium Indigenous Professional Services


Kerry-Ann Charles


Working Collaboration @ International LEVEL
Natural Diseases
transfer of
Animals
Birds
Humans
Transfers of foreign:
Insects
plants
fish
Animals
invasive species
Goose Migration flights @ night
Natural Plants
Eel Grass (disappearance)
Algae
(increase
Changes of Berries
prolonging
Berries
Goose Berries
Cloud Berries


Spring
- Changes in Hunting Patterns
- Water Rises high
- Uncertainty of Start of Hunting
- Applying Cree Knowledge
- Cree Knowledge is best
Know the land
Teaching of Cree Knowledge from Elders

Youth involvement: a success!



McGill-Mistissini collaboration: Buoy to measure ice thickness


Roots

ᒦᑵᐦᒡ, Miikwehch, Thank you!

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Grand Council of the Crees (Eeyou Istchee)
Grand Conseil des Cris (Eeyou Istchee)

ᐄᔨᔫ ᑎᐯᔨᐦᒋᒉᓲ
Cree Nation Government
Gouvernement de la Nation Crie