EEYOU ISTCHEE CLIMATE DATA

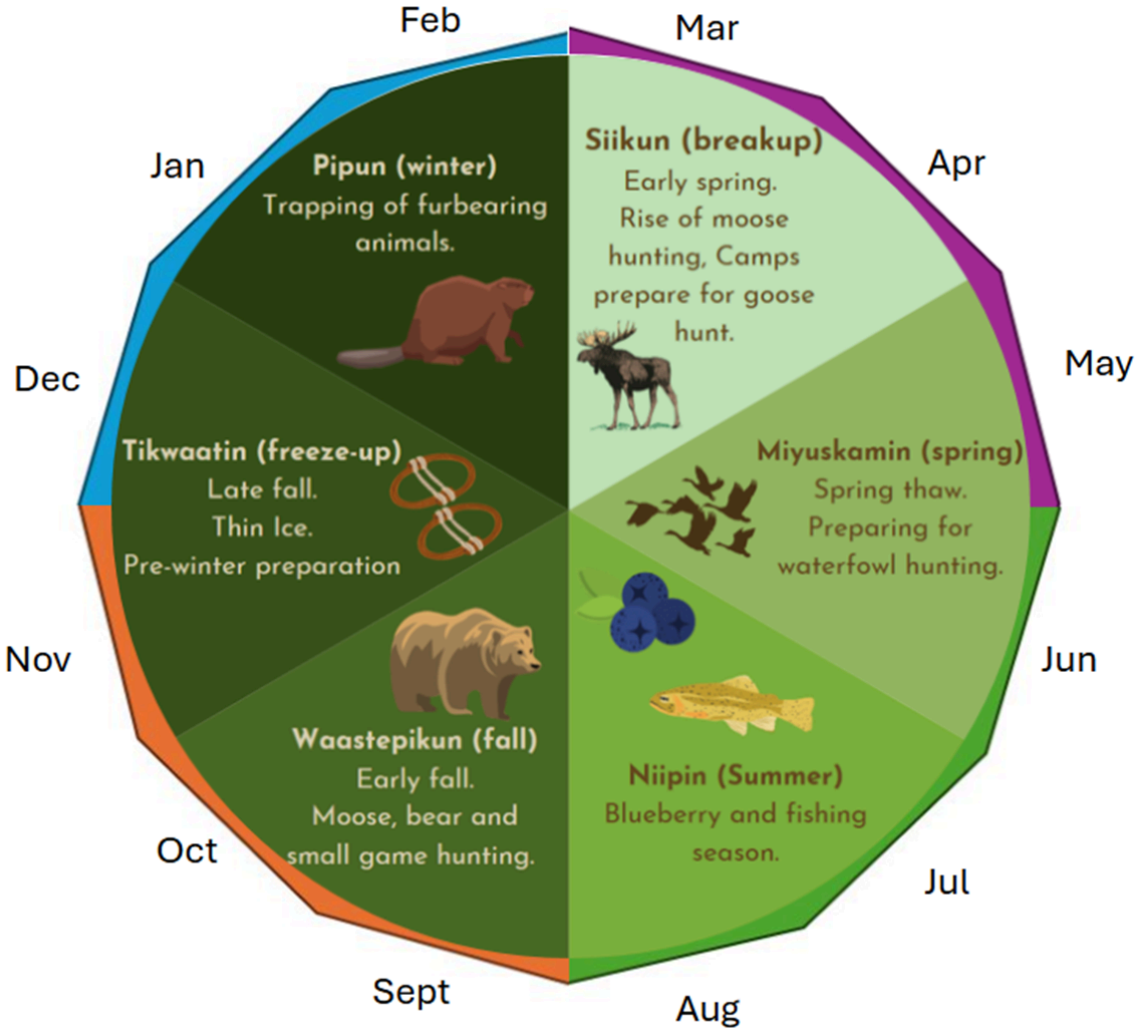
CLIMATE CHANGE ADAPTATION AND ENVIRONMENTAL EMERGENCY PREPAREDNESS WORKSHOP

CANADIAN CENTRE FOR CLIMATE SERVICES | CENTRE CANADIEN DES SERVICES CLIMATIQUES

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

Overview

- **The winters will become warmer.**
- **There will be more potential for growth (both plants & pests).**
- **The last spring frost will be earlier in the year.**
- **Total annual precipitation will increase.**
- **The hottest temperatures will intensify.**
- **The wildfire risk will increase.**
- **Heavy rain days will become more common.**

Scan here to see more climate portraits from Ouranos

https://portraits.ouranos.ca/en/

Scan here to see more projections across Canada on ClimateData.ca

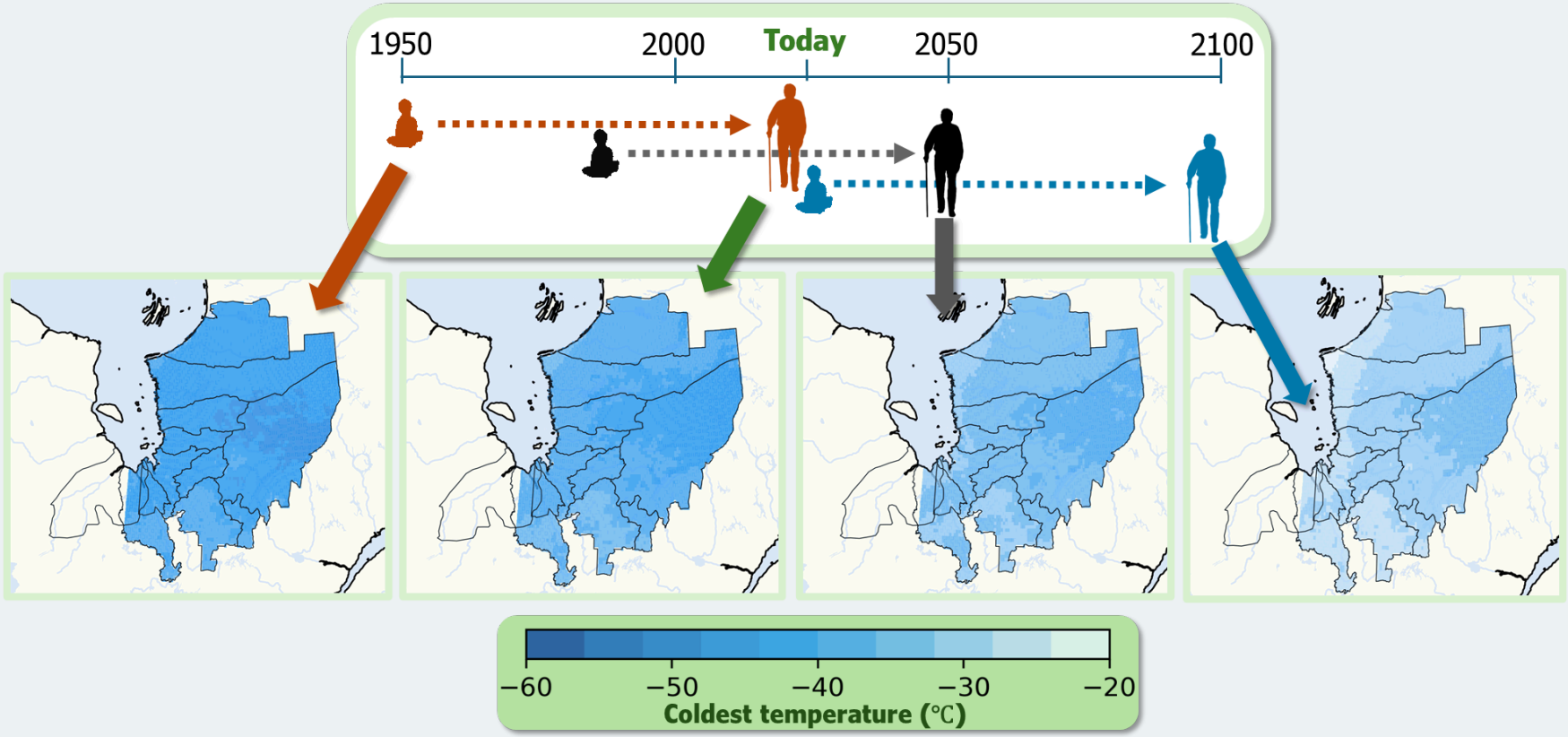
https://climatedata.ca/

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.

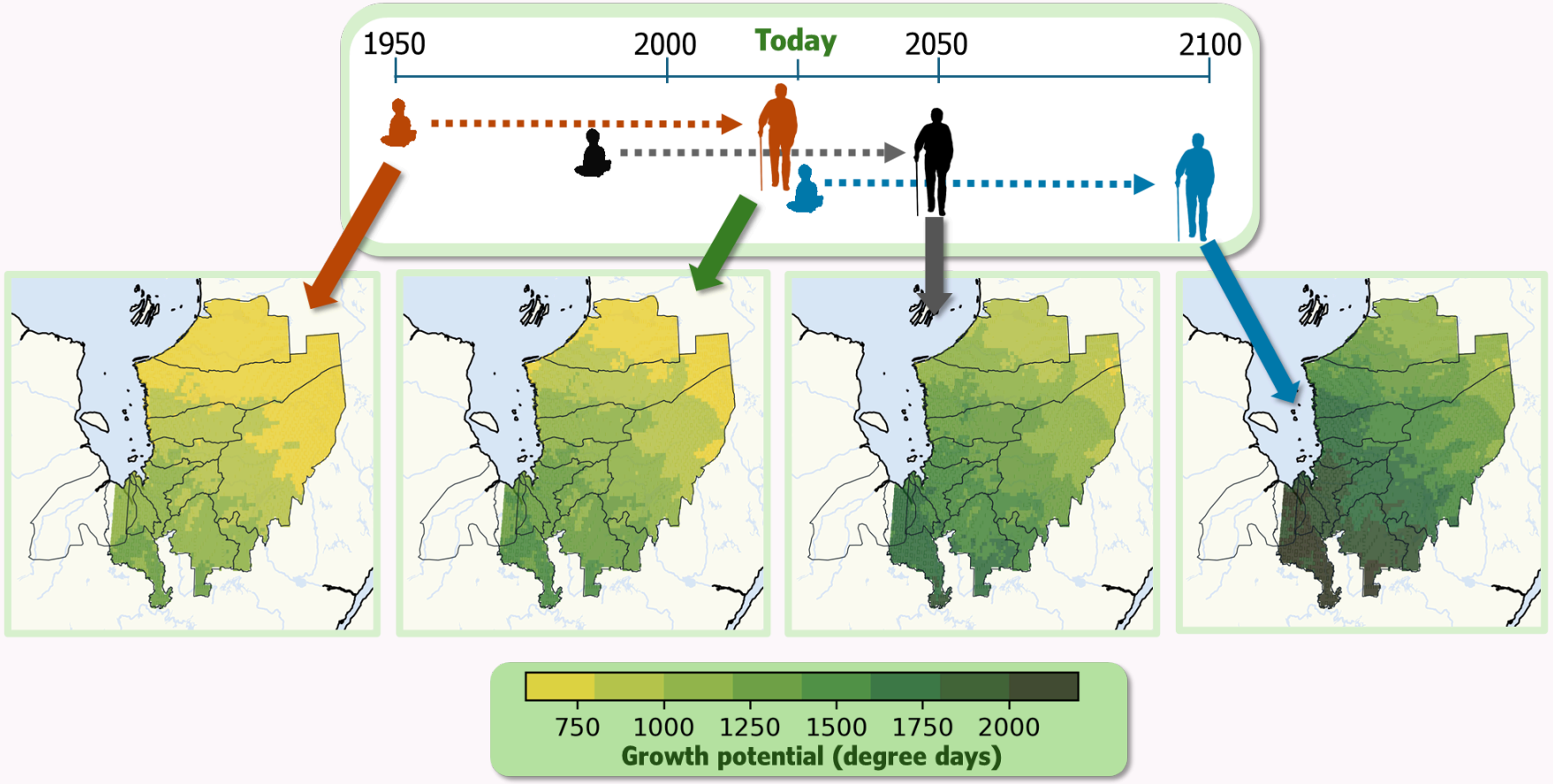


miyuskamin (Mar/Apr)

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.

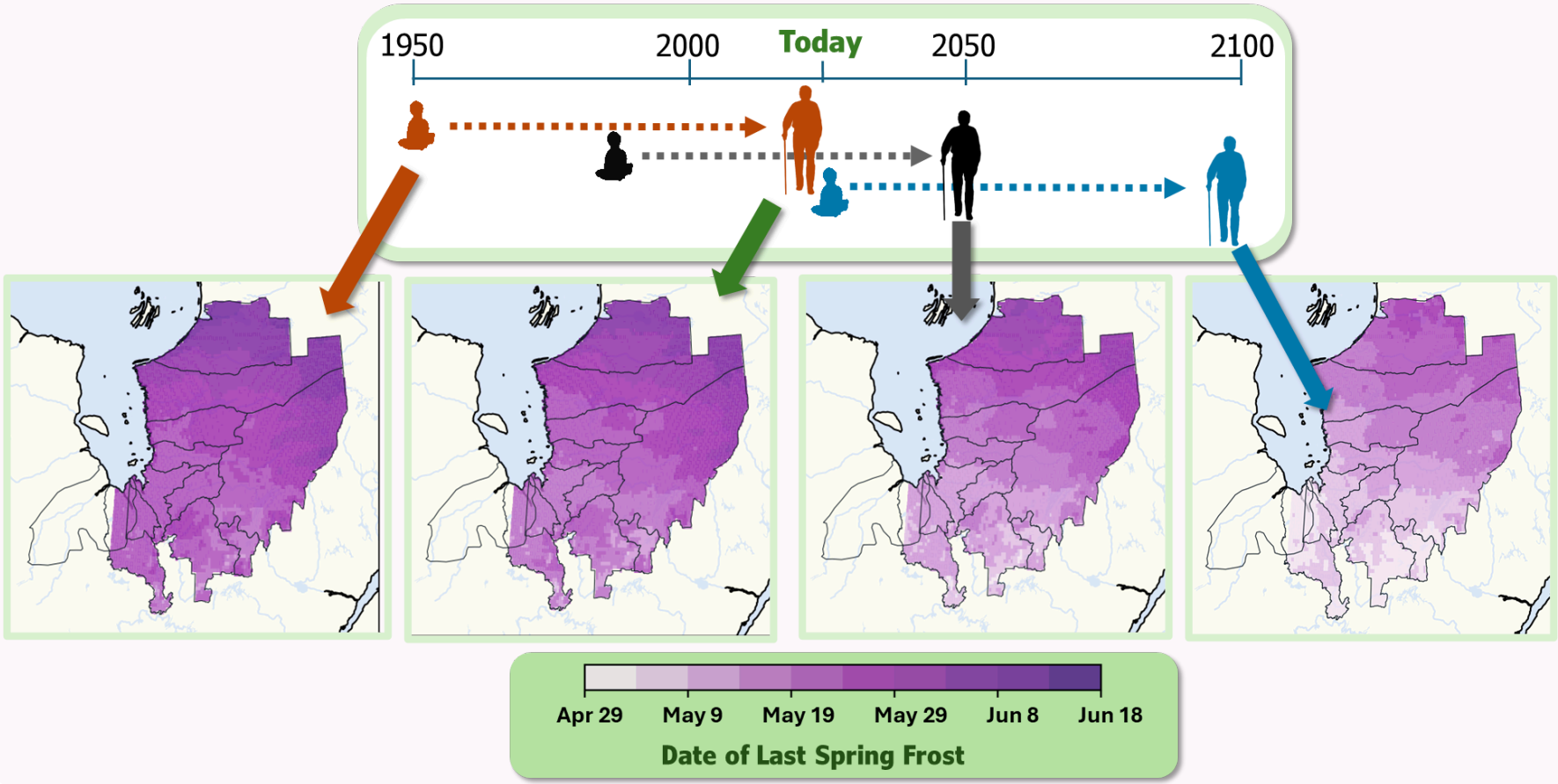


miyuskamin (Mar/Apr)

Last spring frost

What will change?

The last spring frost will be earlier in the year.

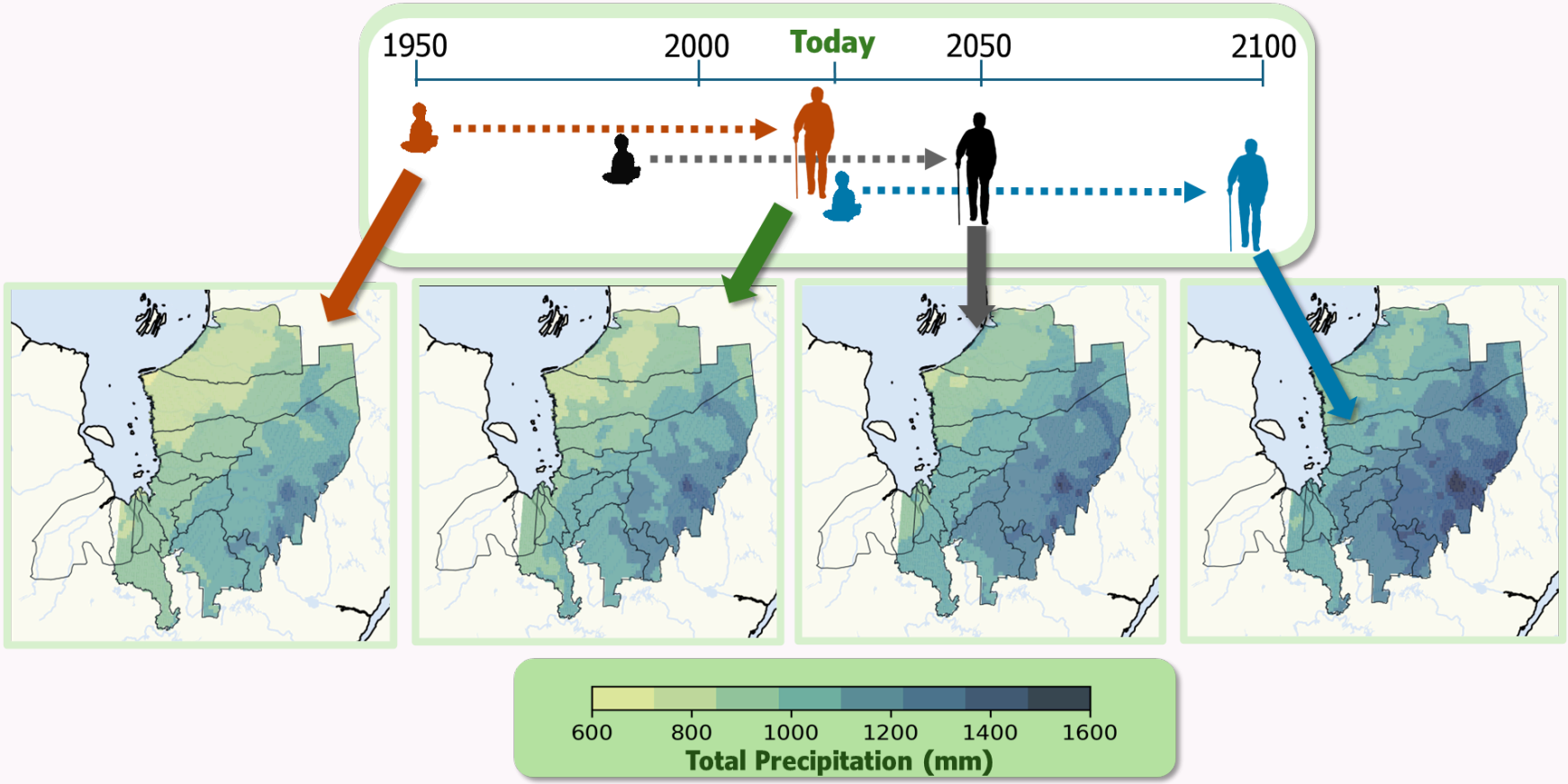


miyuskamin (Mar/Apr)

Total Annual Precipitation

What will change?

The total amount of annual precipitation will increase.

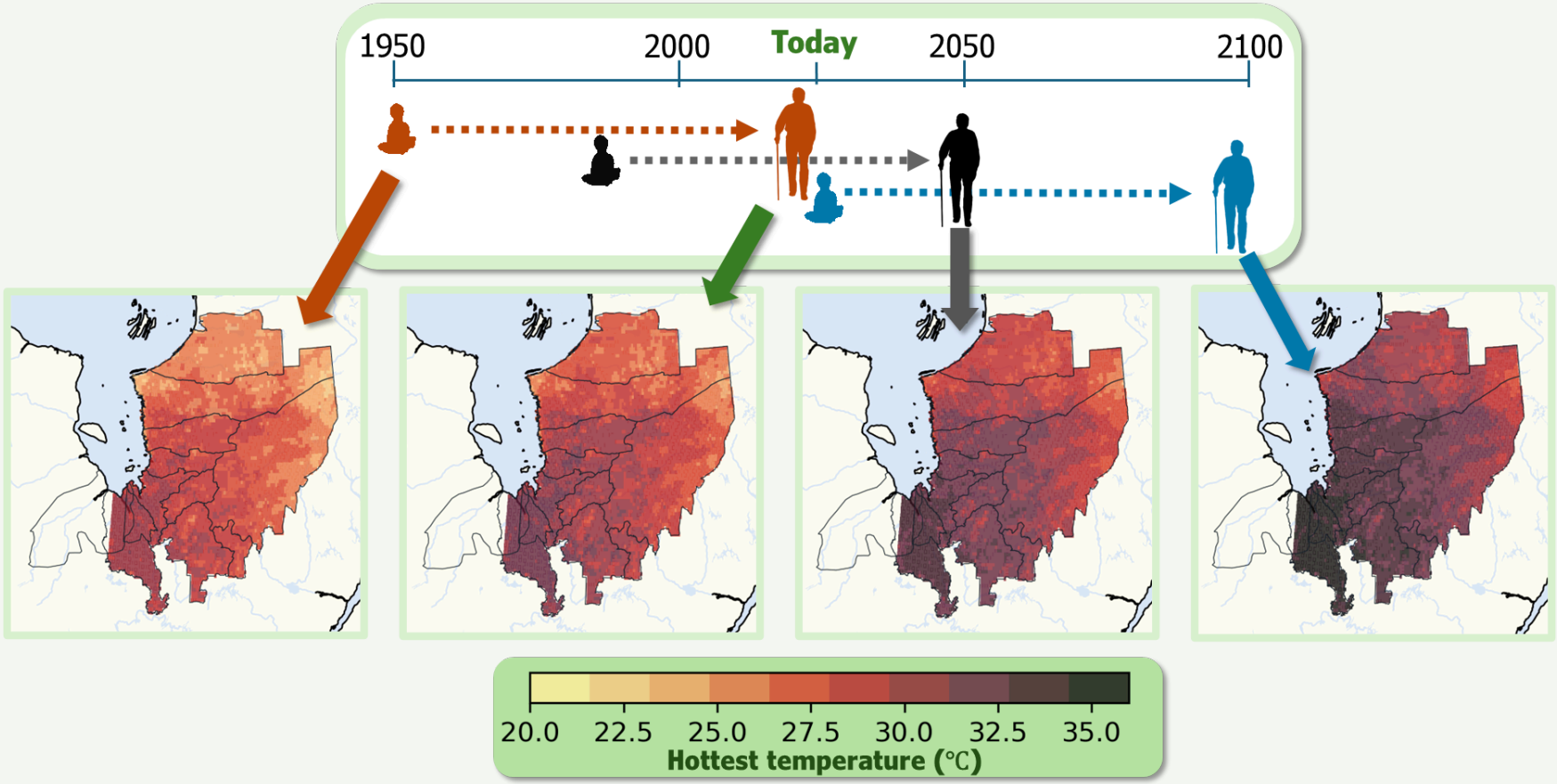


niipin (Jul–Aug)

Hottest temperature

What will change?

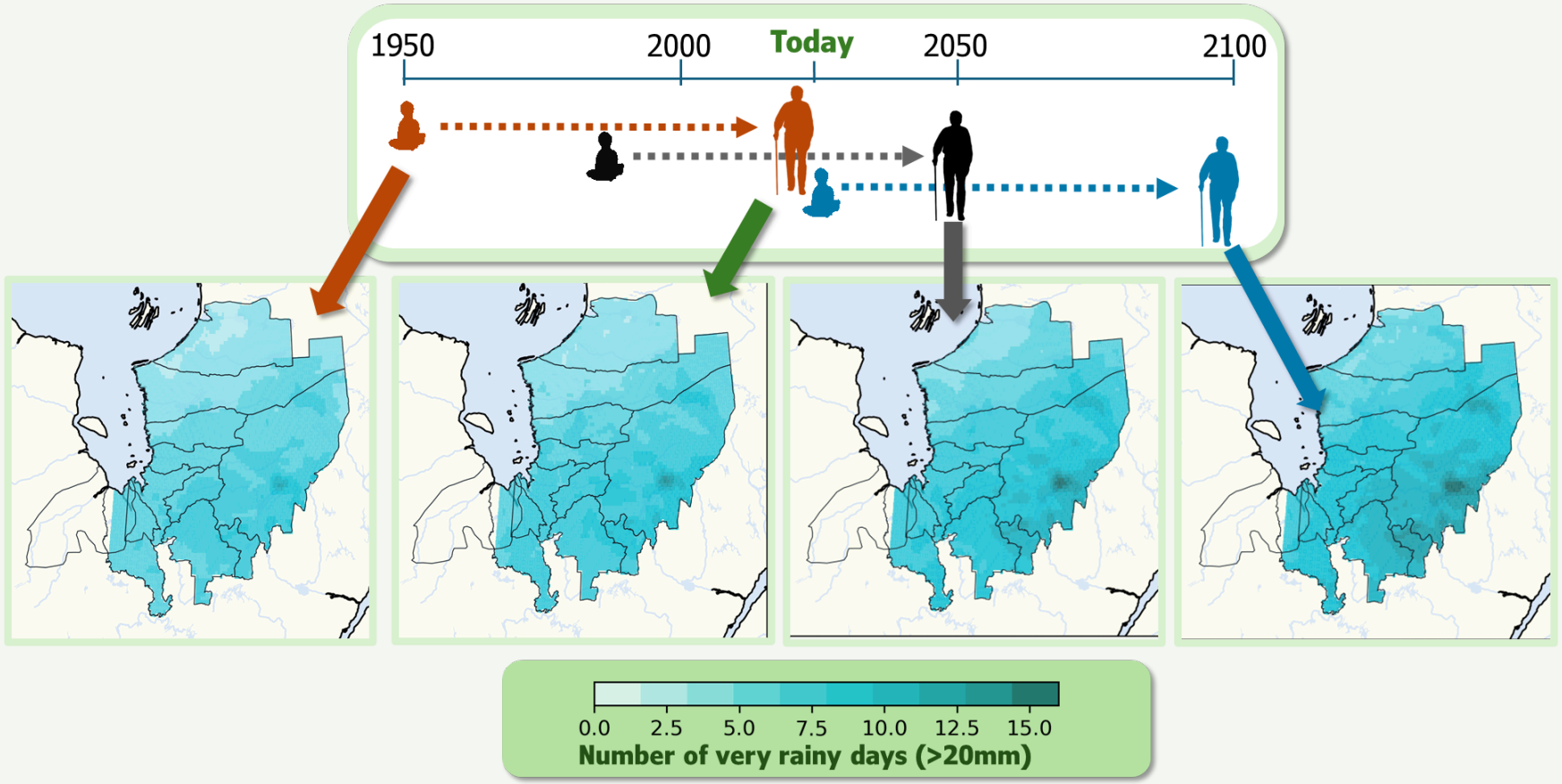
The hottest day of the year has, and will become, hotter.



niipin (Jul–Aug)

Heavy rain days

What will change?
It will become more common to see heavy rain days across the region.

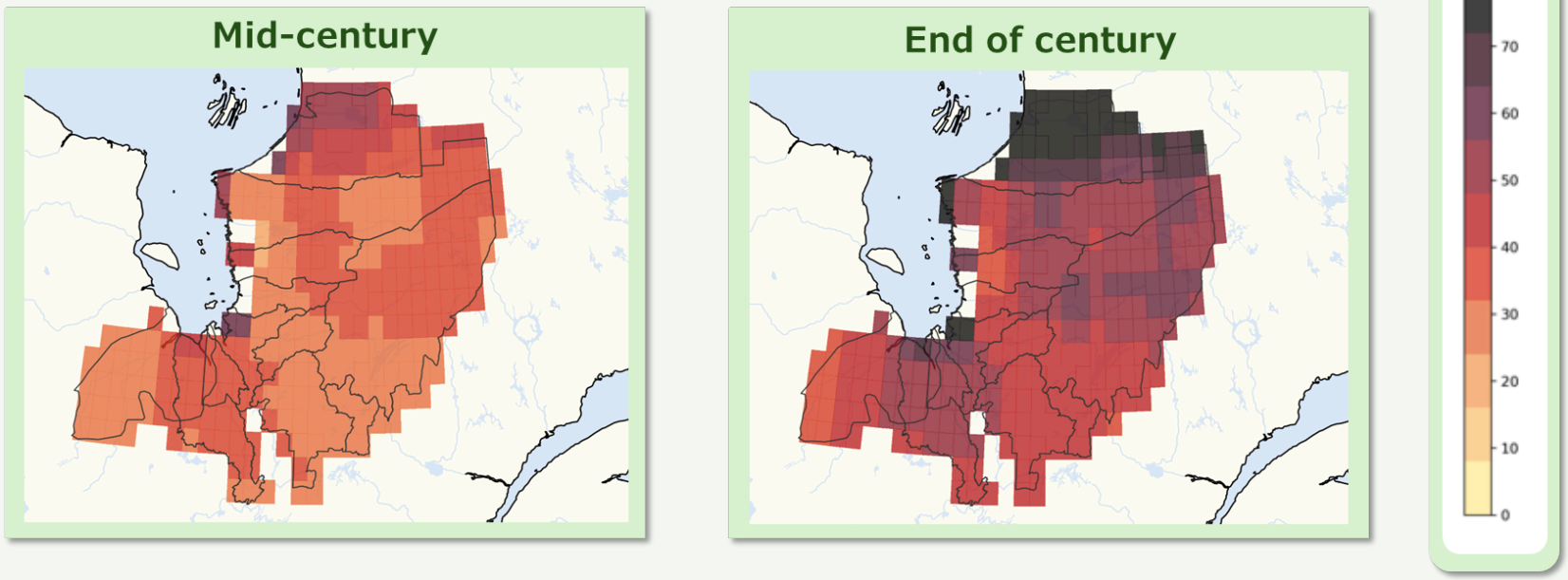


niipin (Jul–Aug)

Wildfire

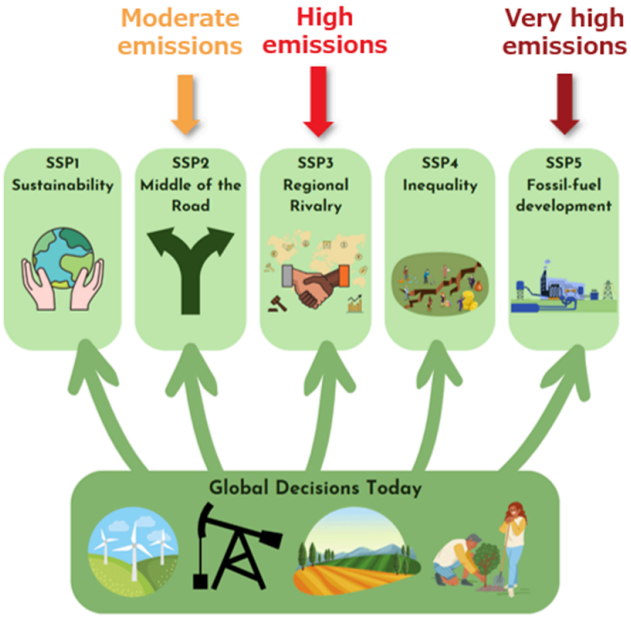
What will change?
The weather contributions to wildfire severity will show significant increase.

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



Additional Information

The future is uncertain, and we use different scenarios to model future greenhouse gas emissions pathways. Shared Socioeconomic Pathways (SSP) are a set of narratives describing possible future development pathways for human society, particularly in relation to its use of fossil fuels and the social and economic factors which drive fossil fuel use. The SSP3-7.0 (Regional Rivalry) pathway is a high emissions scenario, which relies heavily on fossil fuels and an increased use of coal. In this pathway, nationalism drives policy, with focus placed on regional and local issues rather than on global issues (ClimateData.ca, Understanding Shared Socio-economic Pathways (SSPs)). Almost all of the information in this handout is from SSP3-7.0 scenario of the Ouranos ESPO-G6-R2v1 dataset and can be explored through the Ouranos: Climate Portraits website. The snowfall data (coming in 2025) and fire weather data can be explored on ClimateData.ca. The fire weather and freezing rain data displays the Representative Concentration Pathway 8.5, which is a previous iteration of SSP5 (SSP3 is not available for these variables).



When a single value is presented, it is the area-weighted average for the Eeyou Istchee region, from the median (50th percentile) of the ensemble models. The maps also present the median value (50th percentile) of the models.

Further data and information, including the calculations performed, is available for each index in the accompanying technical document. Two additional socioeconomic pathways are also available in the technical document, SSP2 (Middle of the Road) and SSP5 (Fossil-fueled development). The technical document will be available upon request from the Cree Nation Government (CNG).

For additional information on climate data in Quebec, you can reach out to Contact us | Ouranos or the Canadian Centre of Climate Services Support Desk for anywhere in Canada.