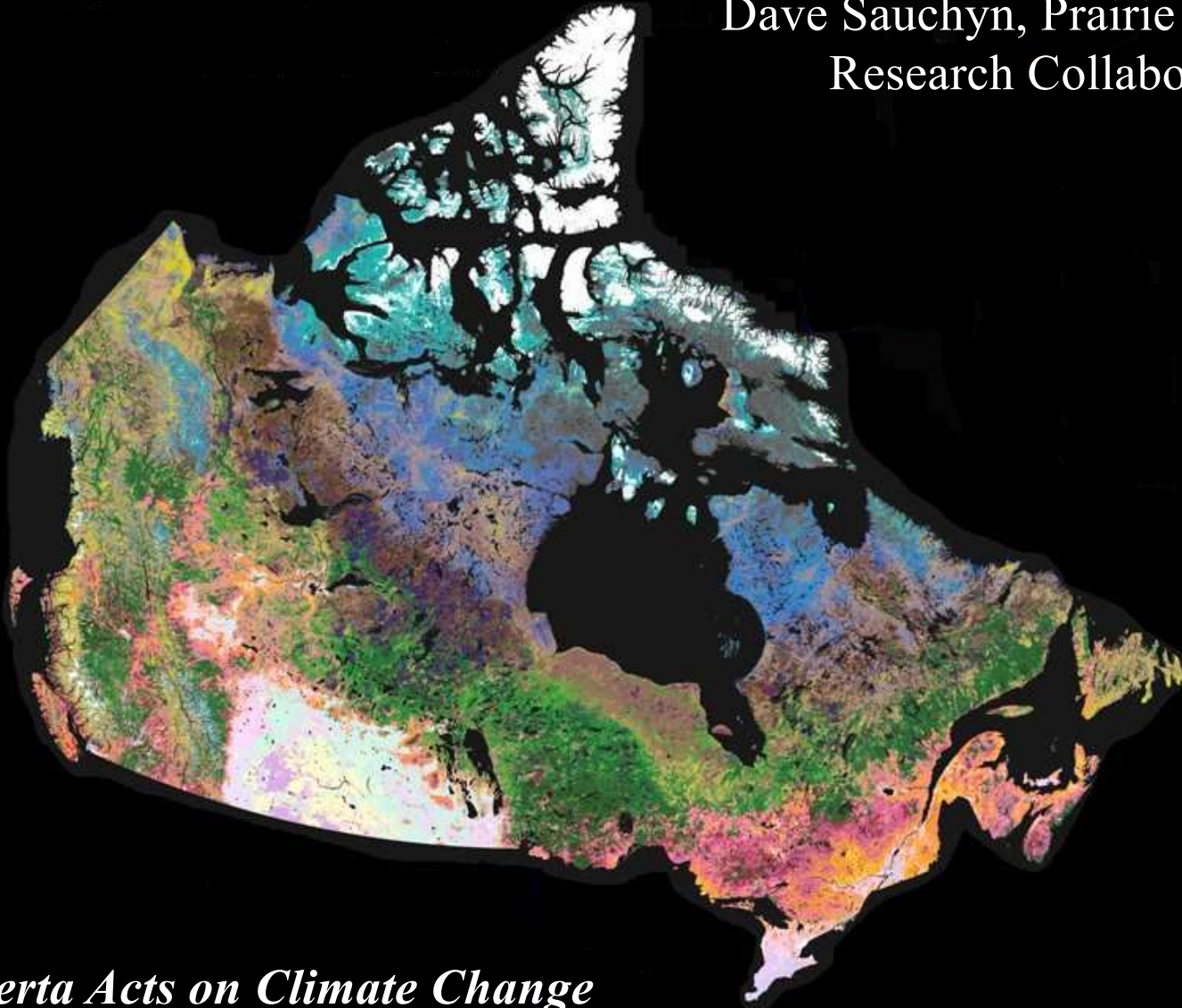


# Climate Change on the Prairies

Dave Sauchyn, Prairie Adaptation  
Research Collaborative



*Alberta Acts on Climate Change*  
**March 12, 2010**

# CHAPTER 7

## Prairies



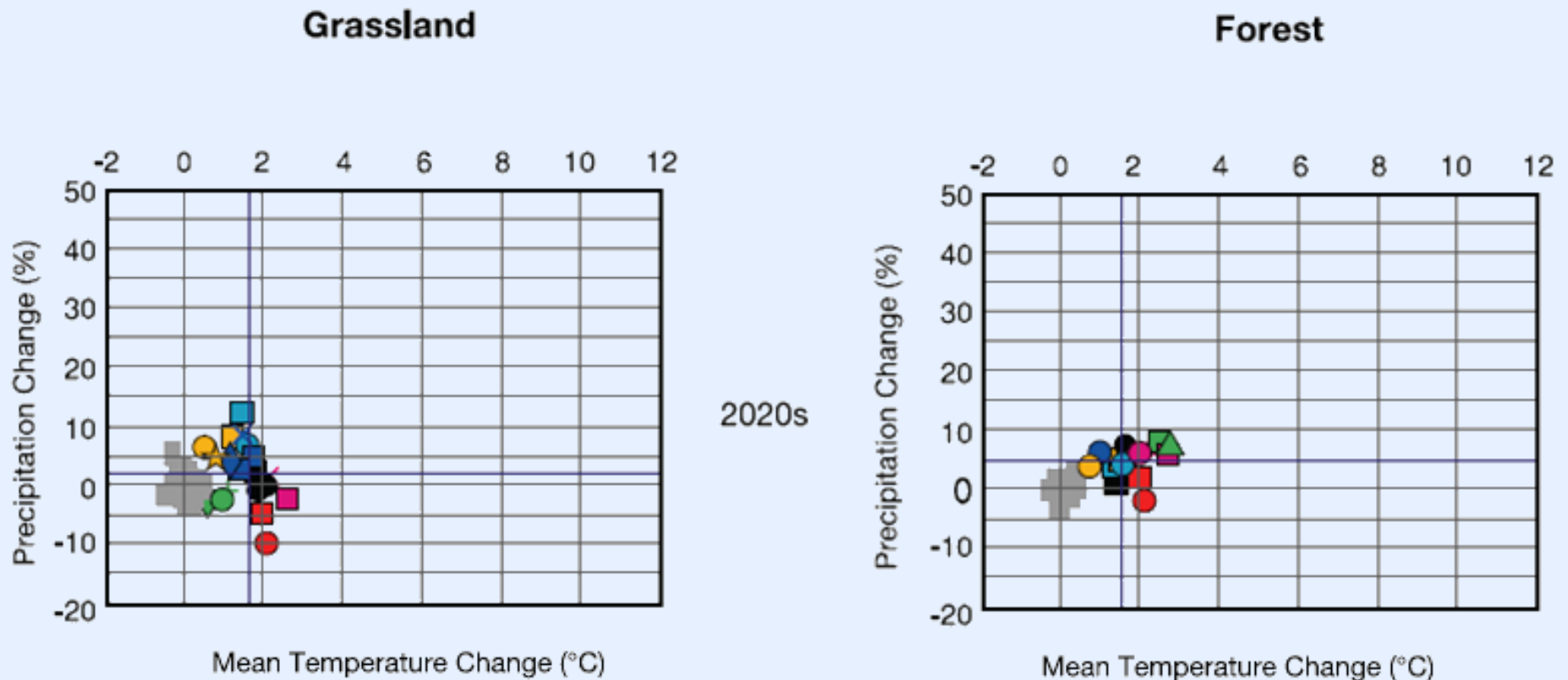
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# Projected changes in mean annual temperature and precipitation



The coloured symbols are the projected from global climate models; the grey squares show the ‘natural’ climate variability simulated by a long control run of the CGCM2.

## **Global warming -- it's not all bad**

In fact, for people living in places like Edmonton, a warmer climate has plenty of benefits

**David Staples**, The Edmonton Journal

*Sunday, November 23, 2008*

**Robert Mendelsohn**, an economics professor at Yale University, who says the benefits of global warming for Canada will be substantial and will outweigh the negative effects. "You're lucky because you're a northern latitude country, Mendelsohn says. **"If you add it all up, it's a good thing for Canada."**

There will be opportunities for Canadian farmers going forward, **Sauchyn says ...** "The most challenging impact of climate change is not going to be a shift in average conditions ..."

The recent warming exceeds the global average



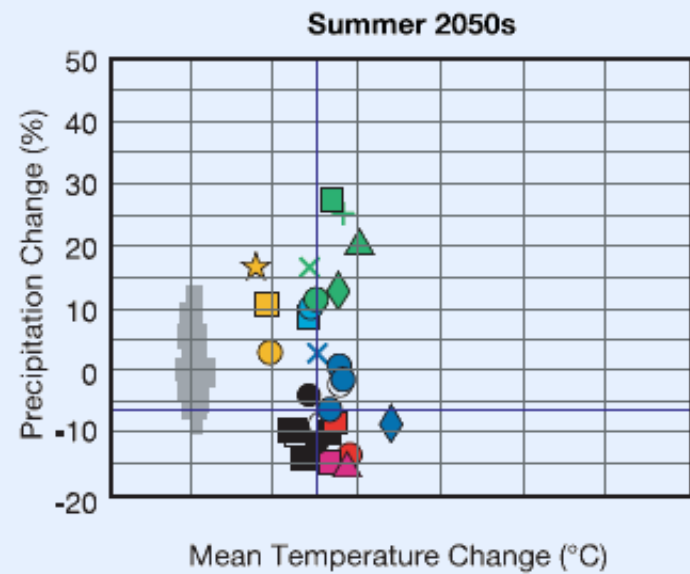
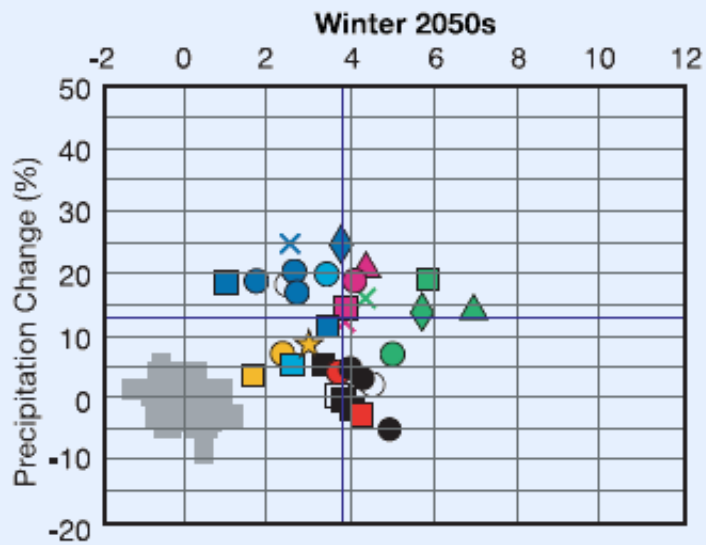
Future climates are outside the range of natural variability

We are losing the advantage of a cold winter

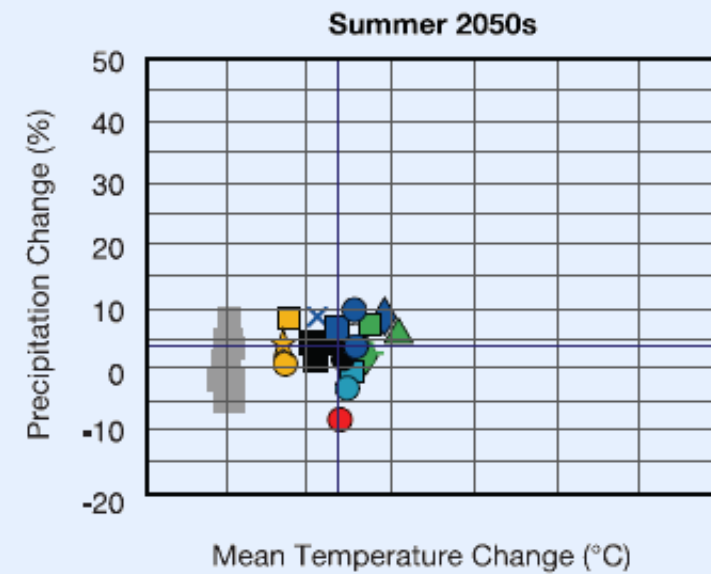
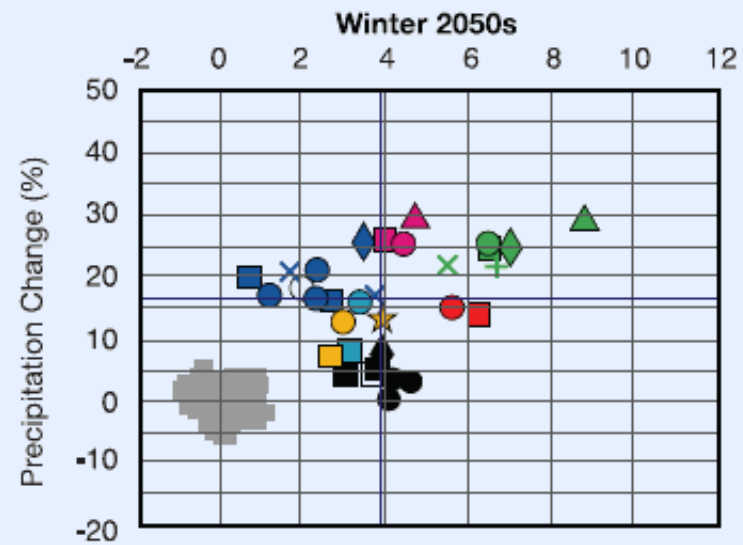


# Seasonal Scenarios

## Grassland



## Forest



Extra water will be available in winter and spring, while summers generally will be drier



On average, there will be slightly to significantly less surface and soil water



Major ecological changes are expected.



There will be greater variation in water and climate



Both drought and unusually wet years could occur with greater frequency and severity

Extreme weather and climate are “wild cards”



The net impacts of climate change are not clear



The impacts of climate change will depend on how well we adapt and how much adaptation is required