

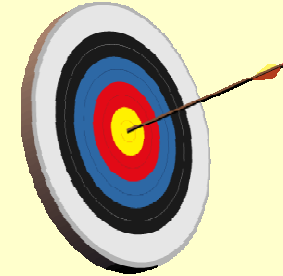
# **Community Perspectives on Climate Change Impacts on Water.**

**December 3<sup>rd</sup>, 2007.**

**Lorena Patino & Susana Prado**



## **SESSION OBJECTIVES**



- To facilitate knowledge transfer.**
- By using maps and images, to stimulate discussion and allow community members to assess potential impacts of climate change on water, and evaluate the implications of those impacts within the context of the identified vulnerabilities. → How do people see themselves adapting?**
- To develop a set of community recommendations to policy-makers.**



Elqui Valley (Chile)

Caption: Bonnie Galenzoski

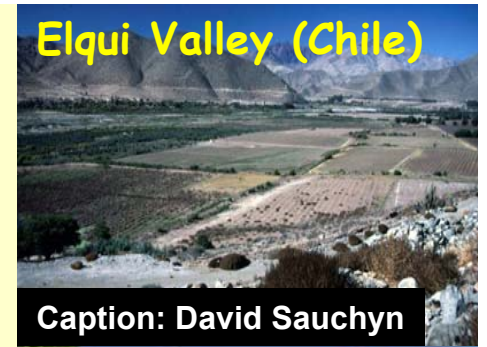


## INSTITUTIONAL ADAPTATION ON CLIMATE CHANGE PROJECT

A research project supported by the Social Sciences and Humanities Research Council (2004-2008).

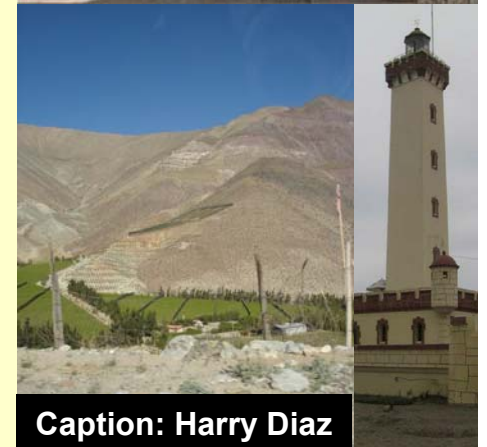
An interdisciplinary team composed by 30 researchers and research assistants.

With the partnership of five Canadian universities (Regina, Saskatchewan, Guelph, British Columbia, y Athabasca), a Chilean university (the Universidad de La Serena) and a large number of public and private agencies in Canada and Chile.



Elqui Valley (Chile)

Caption: David Sauchyn



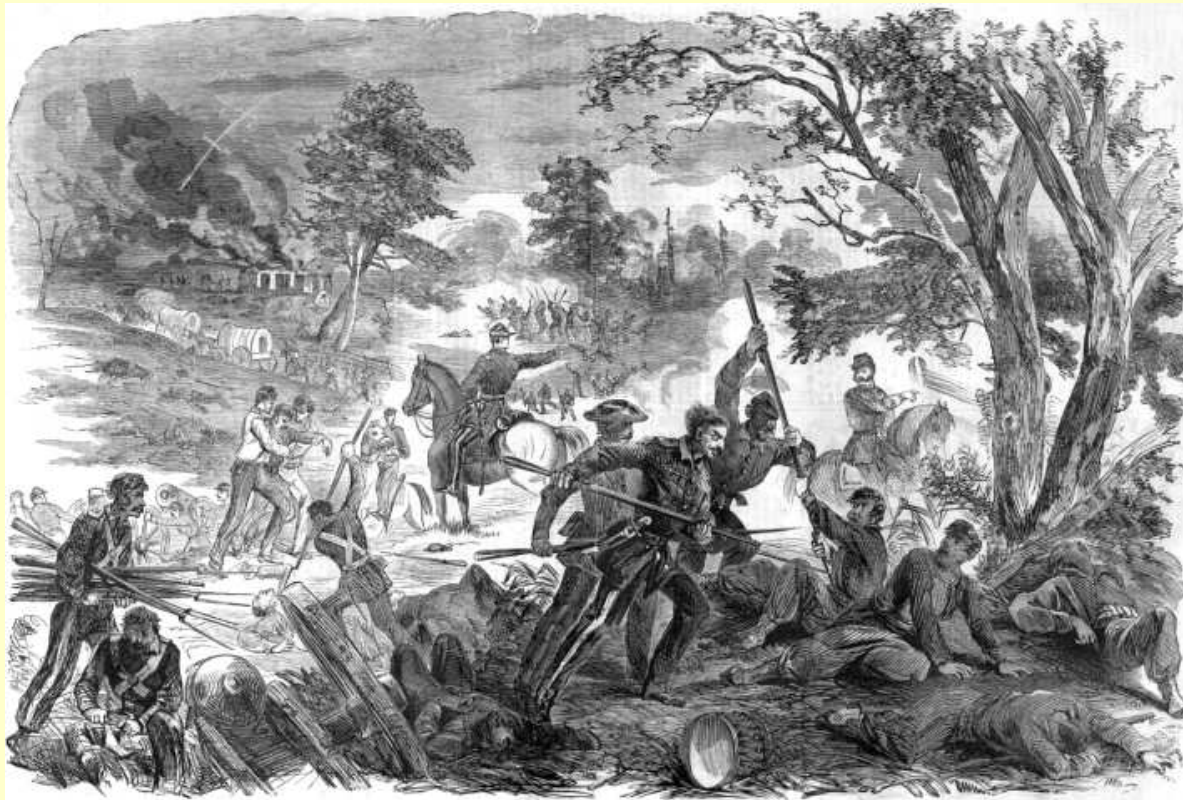
Caption: Harry Diaz

IACC project seeks to understand the **adaptive capacities of rural communities and rural households** and the roles played by **governance institutions** in the development of those capacities.

## IACC Objectives

- 1.To identify the **current social and physical vulnerabilities** of rural communities related to water resource scarcity in the two basins;
- 2.To examine the **effects of climate change** risks on the identified vulnerabilities; and
- 3.To assess the technical and social **adaptive capacities** of the regional institutions to address the vulnerabilities of rural communities to current water scarcity and climate change risks.

# VULNERABILITY





# **VULNERABILITY**

- the inability to respond to stress
- susceptibility to be harmed

**CURRENT VULNERABILITY**



**FUTURE VULNERABILITY**



**Drug Abuse**



**Unemployment**



**Earthquake**



**Out-migration**



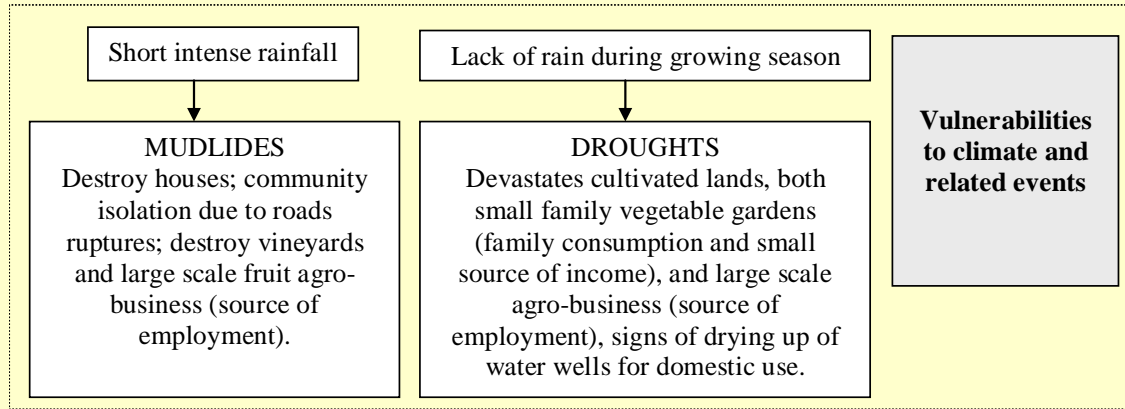
**Government relief**



**Comm. emergency response team**

## EXAMPLE OF COMMUNITY VULNERABILITY TO CLIMATE

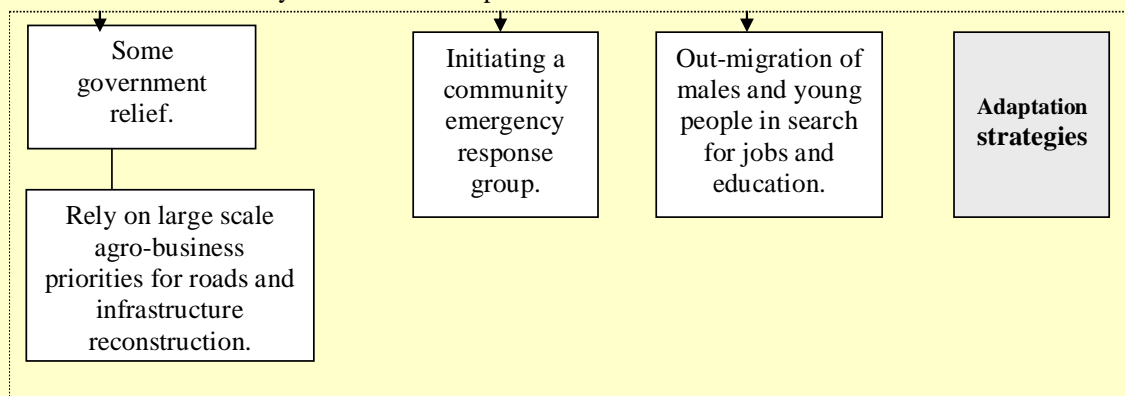
In terms of climate related events and water, list the main climate events and their impacts that you consider relevant for the community livelihood and every day lives.



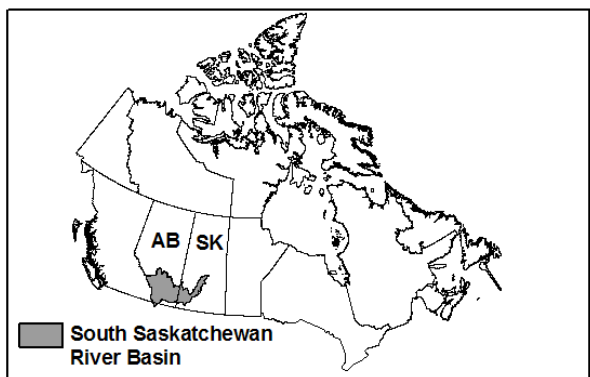
What constraints the community to deal with the impacts of the above climate and related events.



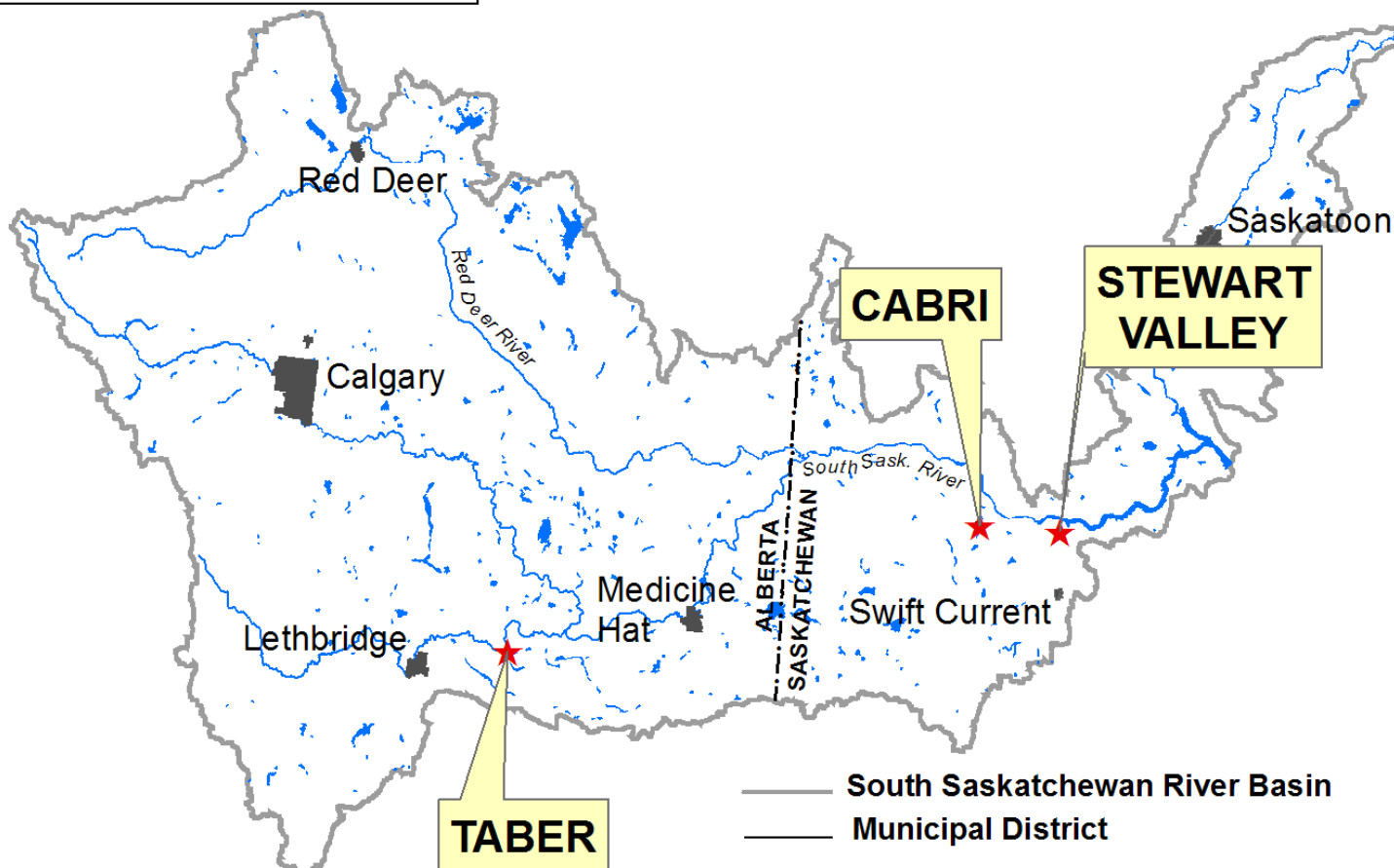
How have the community dealt with the impacts of the above climate and related events.







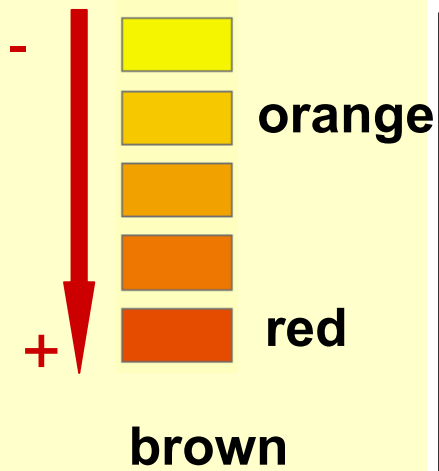
## Three Selected Communities South Saskatchewan River Basin



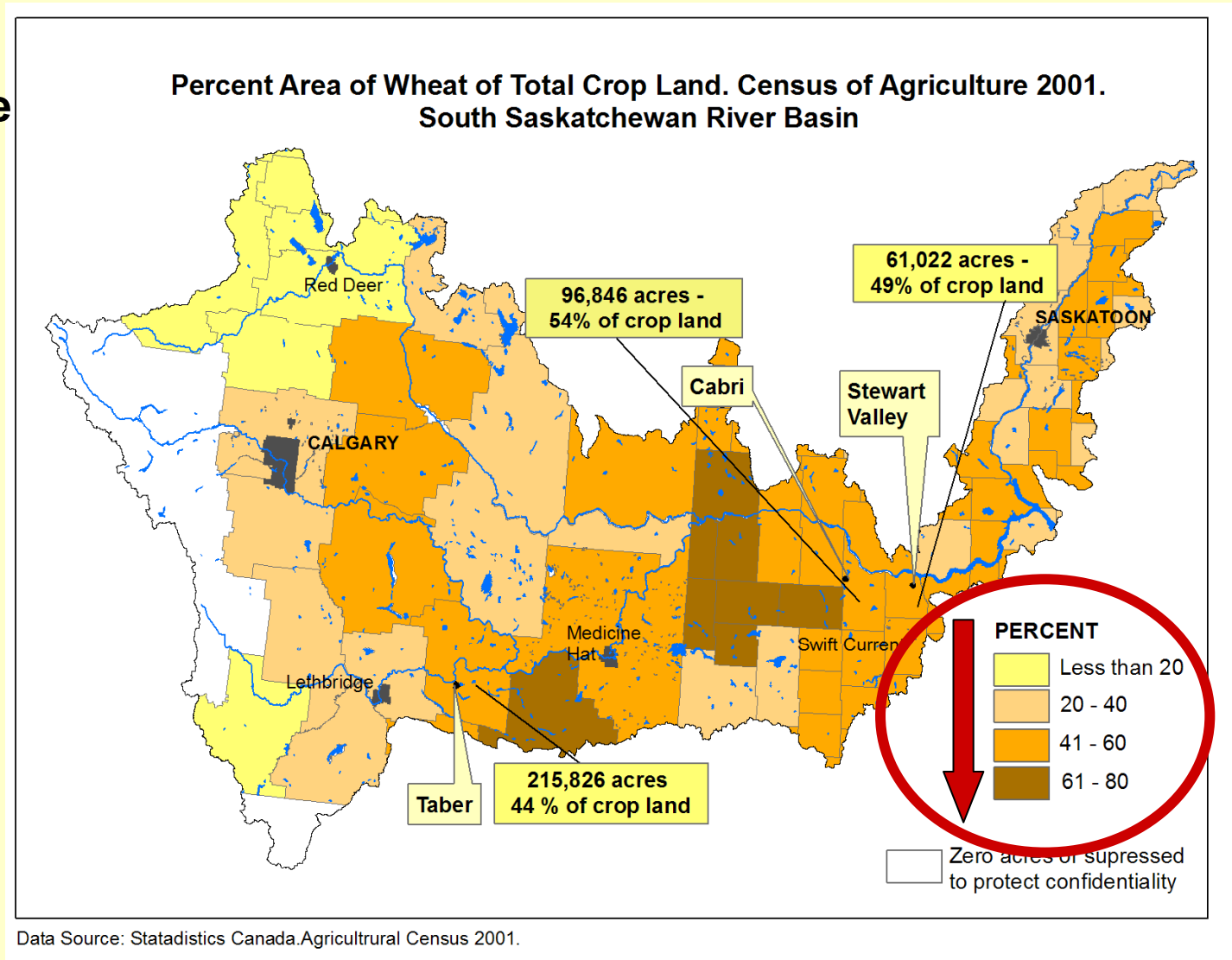
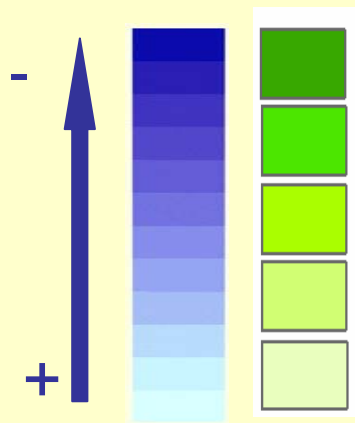
Data Sources: StatsCanada. Census 2001; NRCAN. 2005. National Scale Frameworks Administrative Boundaries, Canada.  
PFRA GIS & Hydrology Units . 2006. Hydrometric Gauging Stations of the PFRA Watershed Project.

# INCREASE

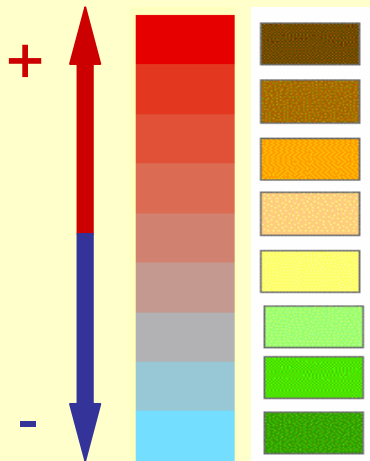
yellow



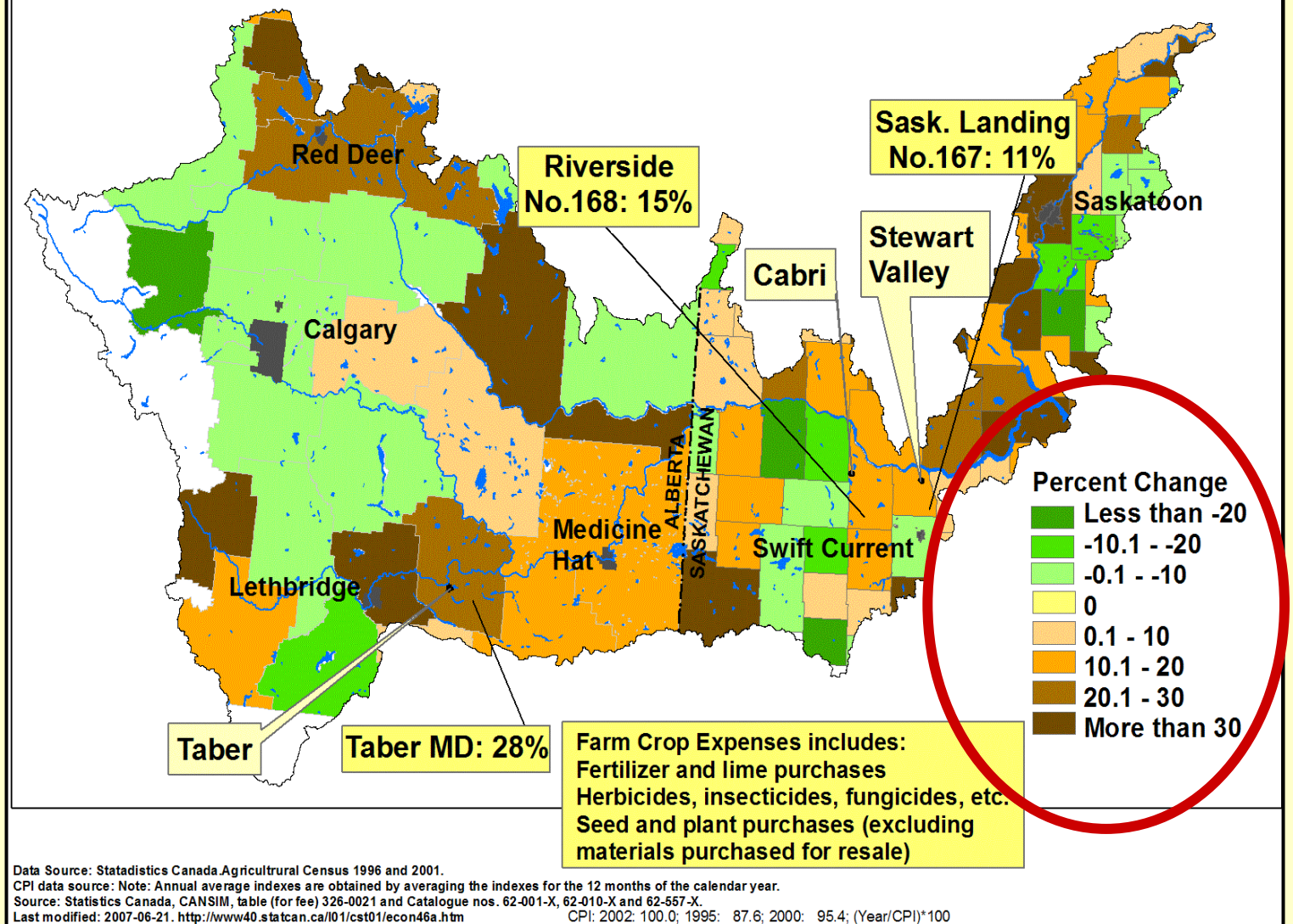
# DECREASE



# MIXED



## Change in the Farm Crop Expenses 1995 - 2000. Census 1996 and 2001. South Saskatchewan River Basin.



# TOPIC

Use of Irrigation - Acres. Census of Agriculture 2001

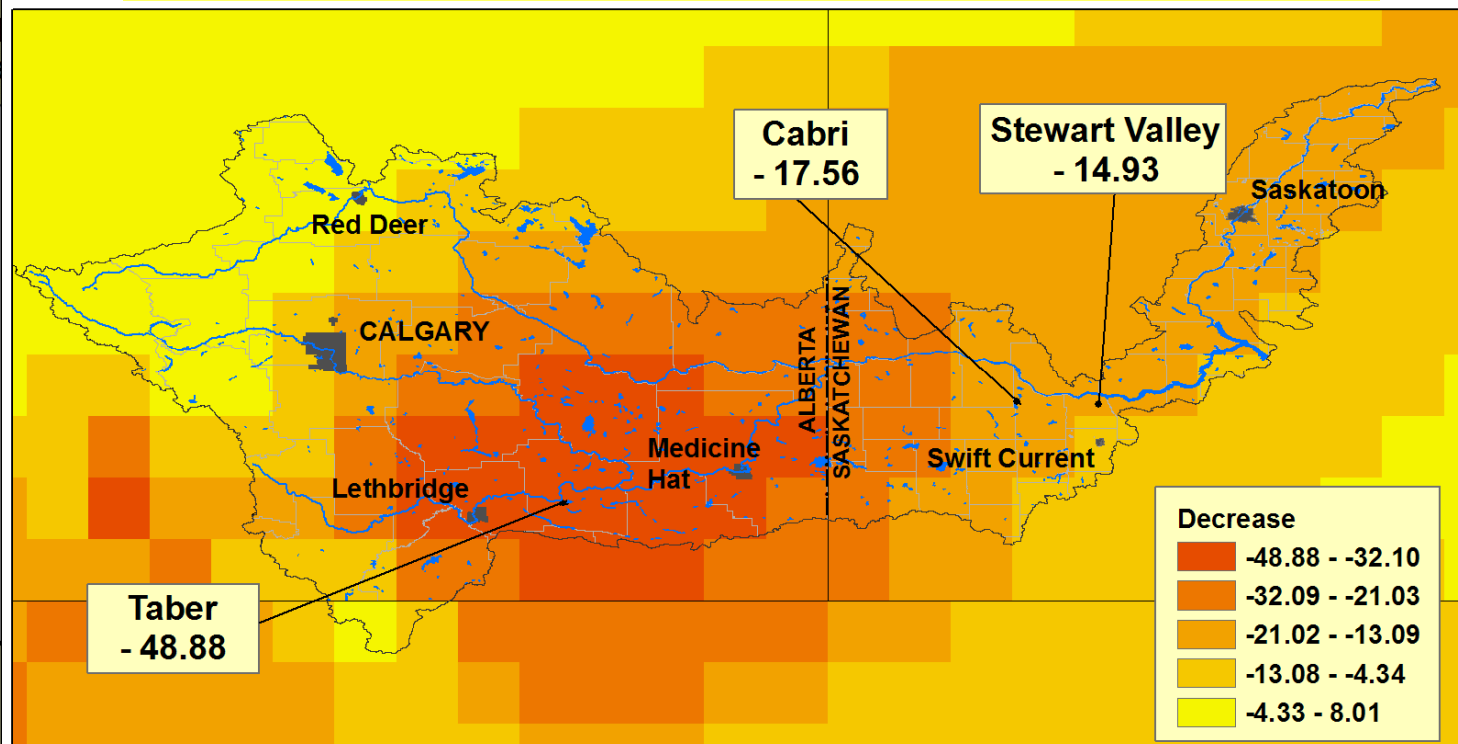
South Saskatchewan River Basin

Agricultural Land

Percent of Agricultural Land in Crop Landuse.

include  
Crop L  
Summe  
Land,  
Tame, S  
and  
Natural  
Pasture

## Decrease in Climate Moisture by 2050: Growing Season (May-June-July)



Data Source: St

**AGENDA**  
**Community perspectives on climate change impacts on water**  
**survey session**

Taber, December 3<sup>rd</sup>, 2007.

The survey session is intended to:

1. Develop a scheme of the current community vulnerabilities to climate and related water events.
2. Present to participants the findings of the interviews pursued during the summer of 2006 by Susana Prado. This section will present community exposures and adaptive strategies to deal with current impacts of climate related events on water.
3. Present to participants potential future climate change scenarios in the South Saskatchewan River Basin, and their potential impacts on water.
4. Listen to participants' reactions/concerns/recommendations/feedback to potential impacts of future climate change on water.

**09:00** Coffee and muffins.

**09:15** Welcome, presentation of the goal of the research, introduction to the idea of vulnerability and related concepts, and the purpose and expected outcomes of this session.

**09:30** Group discussion and development of community vulnerability scheme of the impacts of current climate related events on water. Split in 2 groups.

**10:15** Refreshment break

**10:30** Presentation of current community exposures and adaptation strategies to the impacts of climate change on water.

**11:00** Refinement of scheme of community vulnerability to climate, if necessary.

**11:15** Presentation of potential impacts of future climate change on water.

**11:45** Lunch (will be provided)

**11:45** Lunch (will be provided)

**13:00** Discussion of implications of potential impacts of future climate change on current exposures and adaptive strategies.

**13:30** Discussion of the role of government institutions under potential impacts of future climate change on water.

**14:00** Thank you and wrap up.