

Community Perspectives on Climate Change Impacts on Water.

December 6th, 2007.

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Social Sciences and Humanities
Research Council of Canada

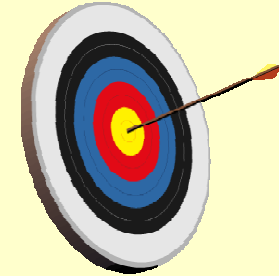
Conseil de recherches en
sciences humaines du Canada

Canada



UNIVERSIDAD DE
LA SERENA

THIS 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.

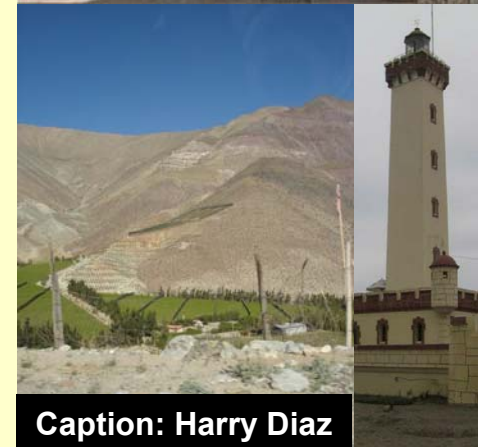
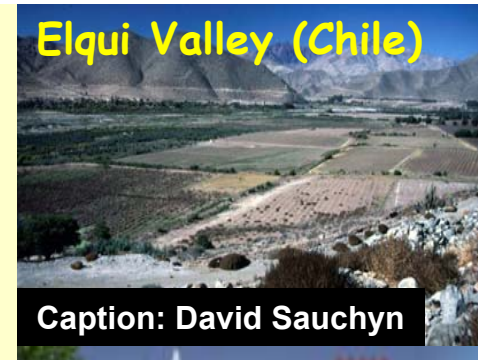


INSTITUTIONAL ADAPTATION ON CLIMATE CHANGE PROJECT

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

An interdisciplinary team composed by 30 researchers and research assistants.

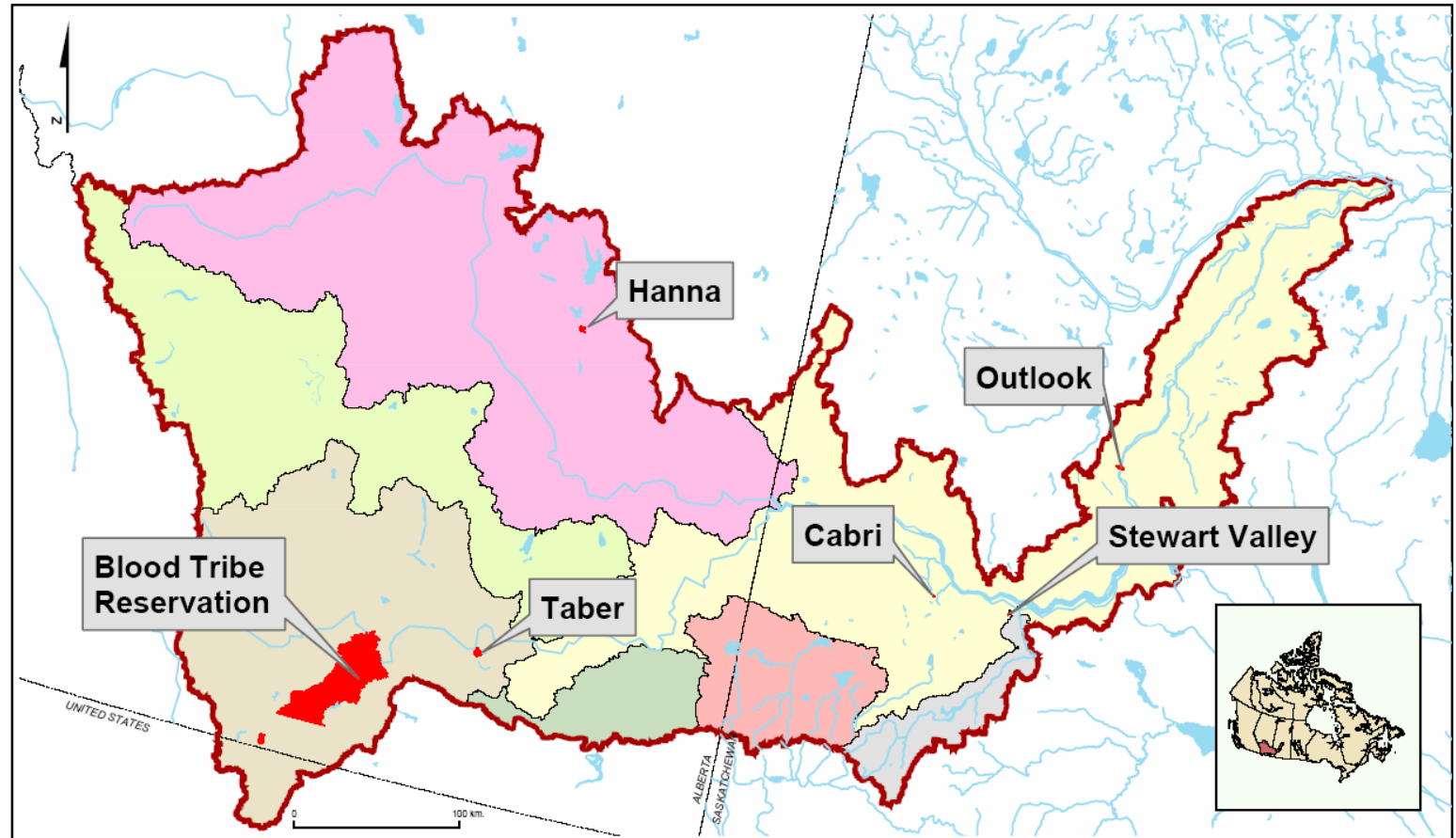
With the partnership of five Canadian universities (Regina, Saskatchewan, Guelph, British Columbia, y Athabasca), a Chilean university (the Universidad de La Serena) and a large number of public and private agencies in Canada and Chile.



Community Case Studies

Selected Communities in the South Saskatchewan River Basin (SSRB).

(Map prepared for the IACC project - November 2005)



SSRB Sub-Basin

- Bigstick Lake
- Bow River
- Oldman River
- Red Deer River

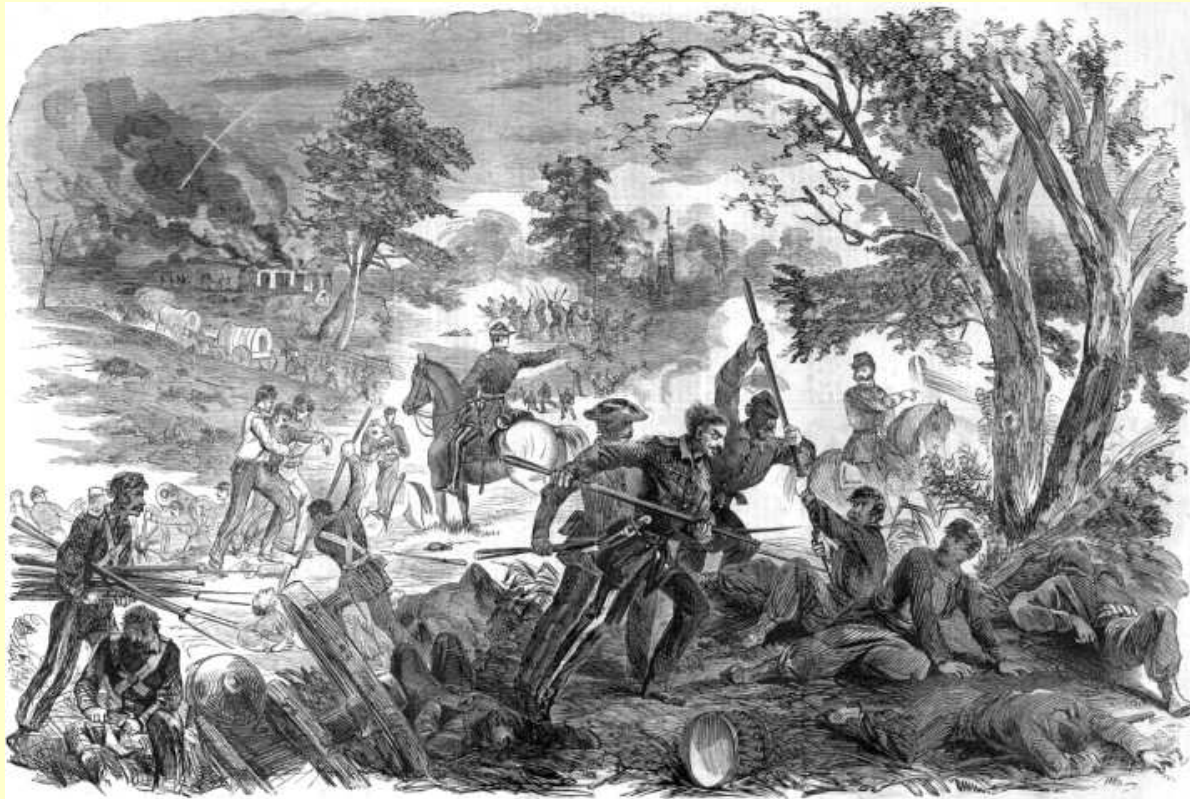
- Seven Persons Creek
- South Saskatchewan River
- Swift Current Creek
- SSRB

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 or ability to respond to stress
- susceptibility to be harmed

CURRENT VULNERABILITY



FUTURE VULNERABILITY



Drug Abuse



Unemployment



Earthquake



Out-migration



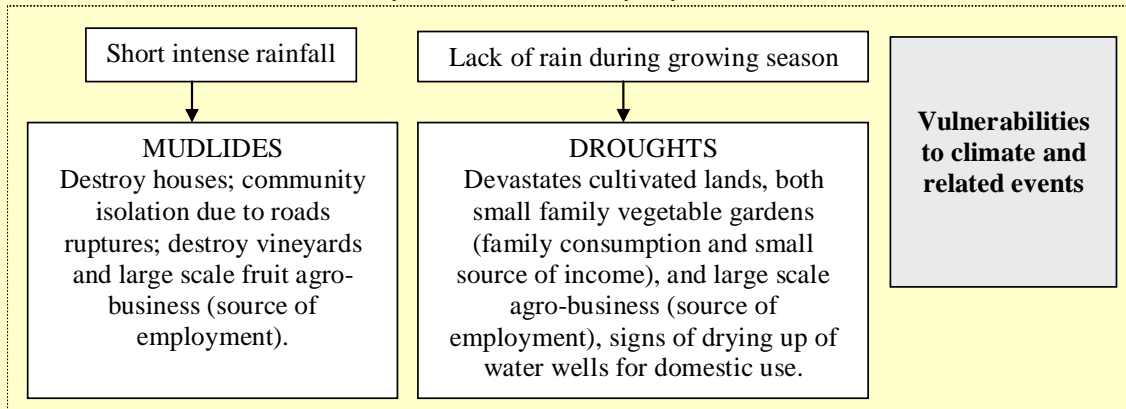
Government relief



Comm. emergency response team

EXAMPLE OF COMMUNITY VULNERABILITY TO CLIMATE

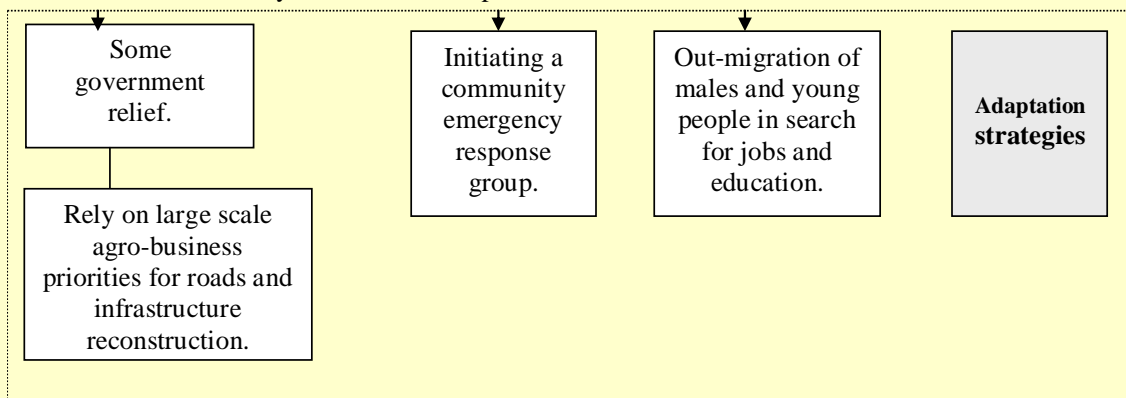
In terms of climate related events and water, list the main climate events and their impacts that you consider relevant for the community livelihood and every day lives.



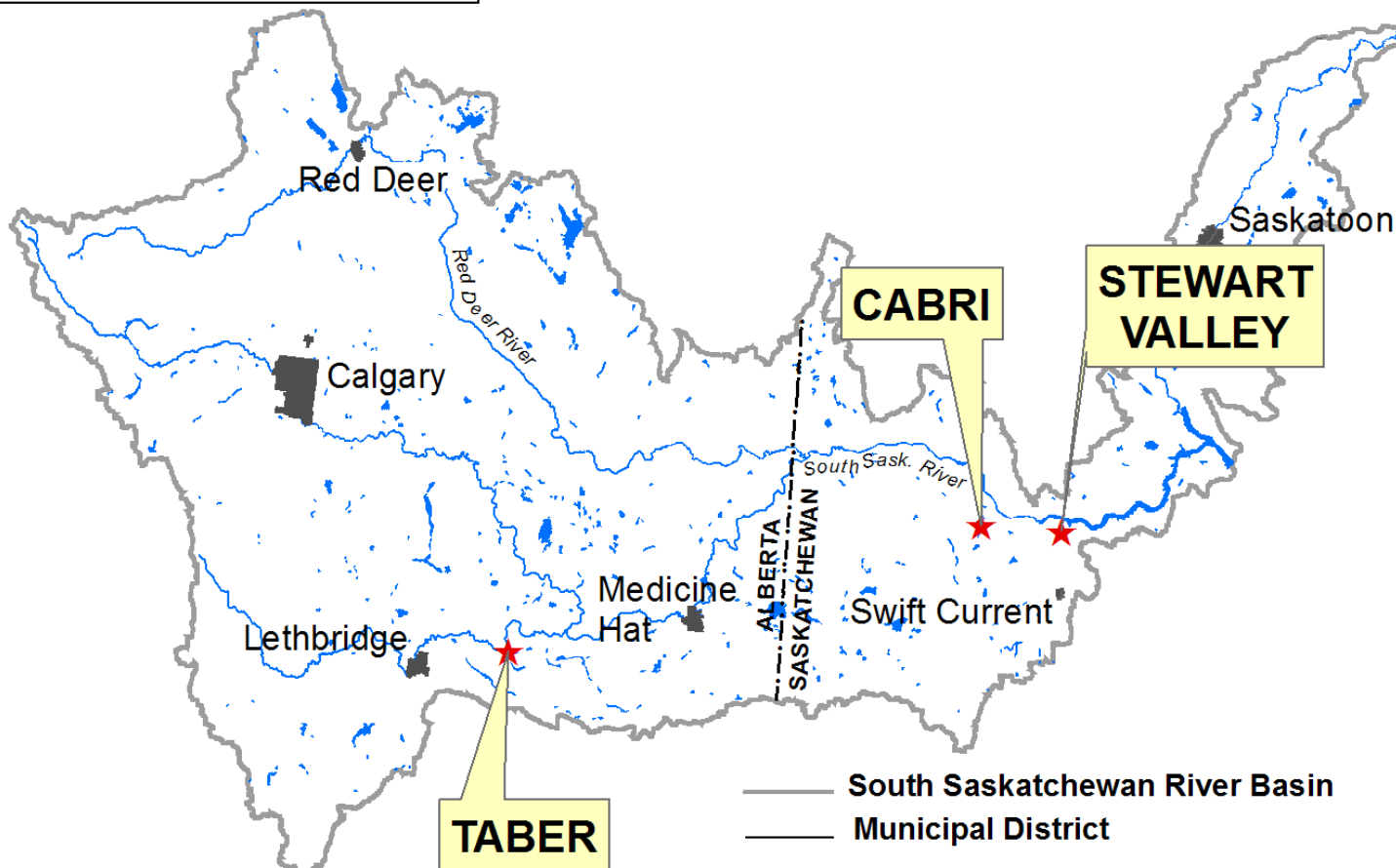
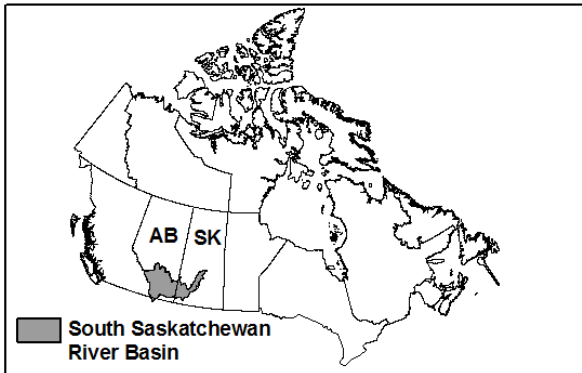
What constraints the community to deal with the impacts of the above climate and related events.



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



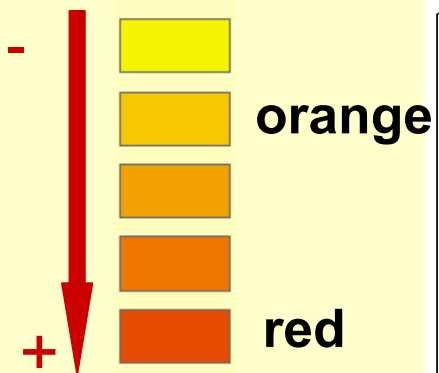
Three Selected Communities South Saskatchewan River Basin



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.

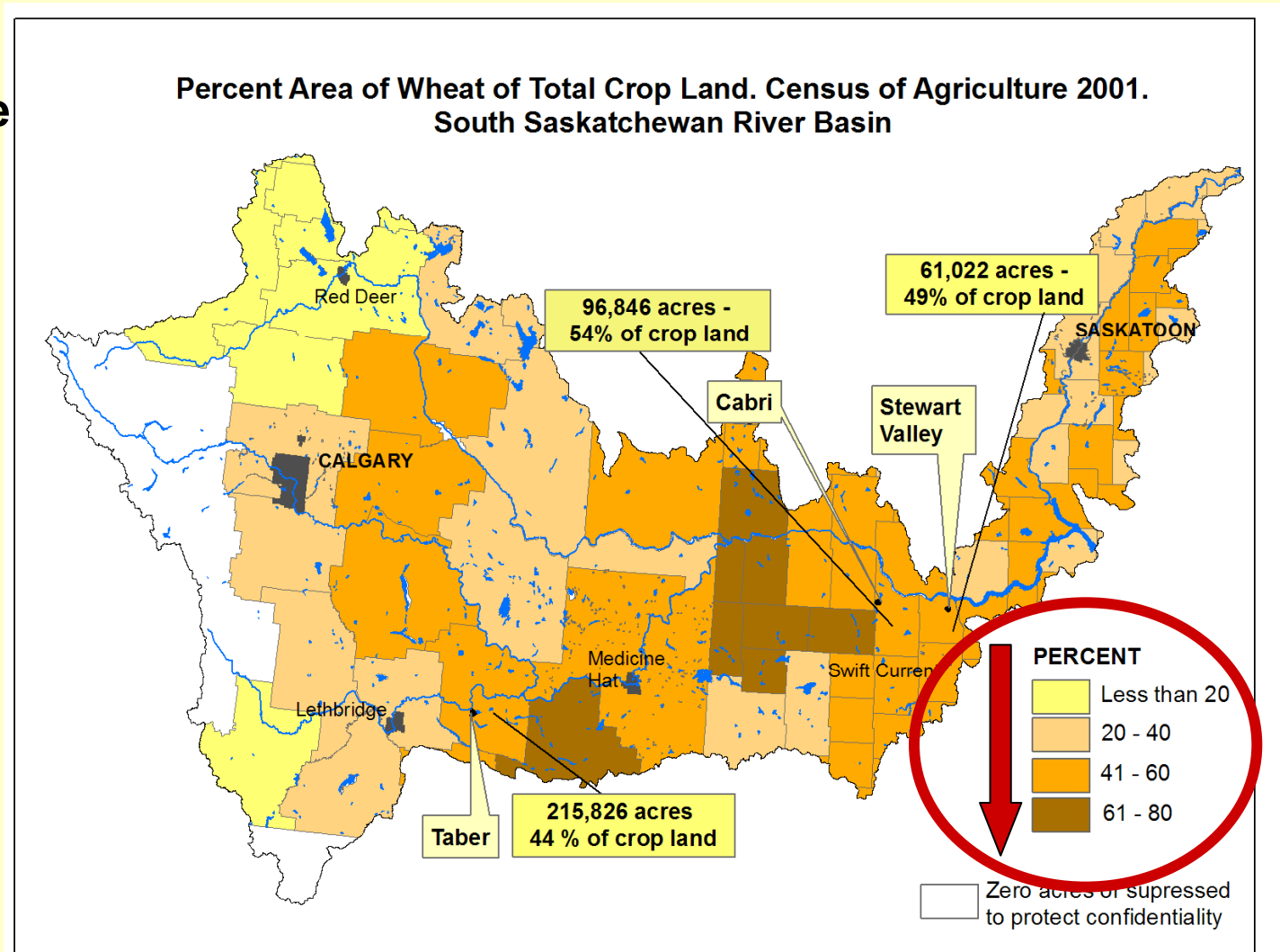
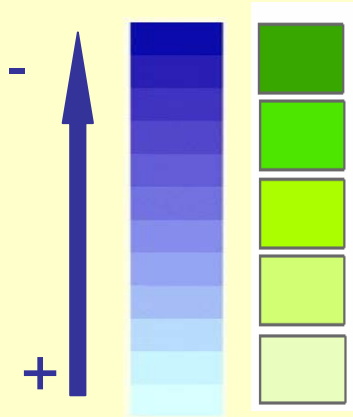
INCREASE

yellow



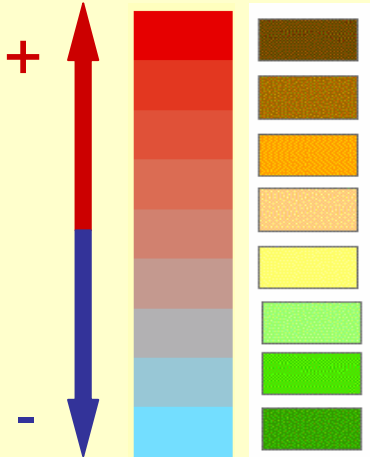
brown

DECREASE

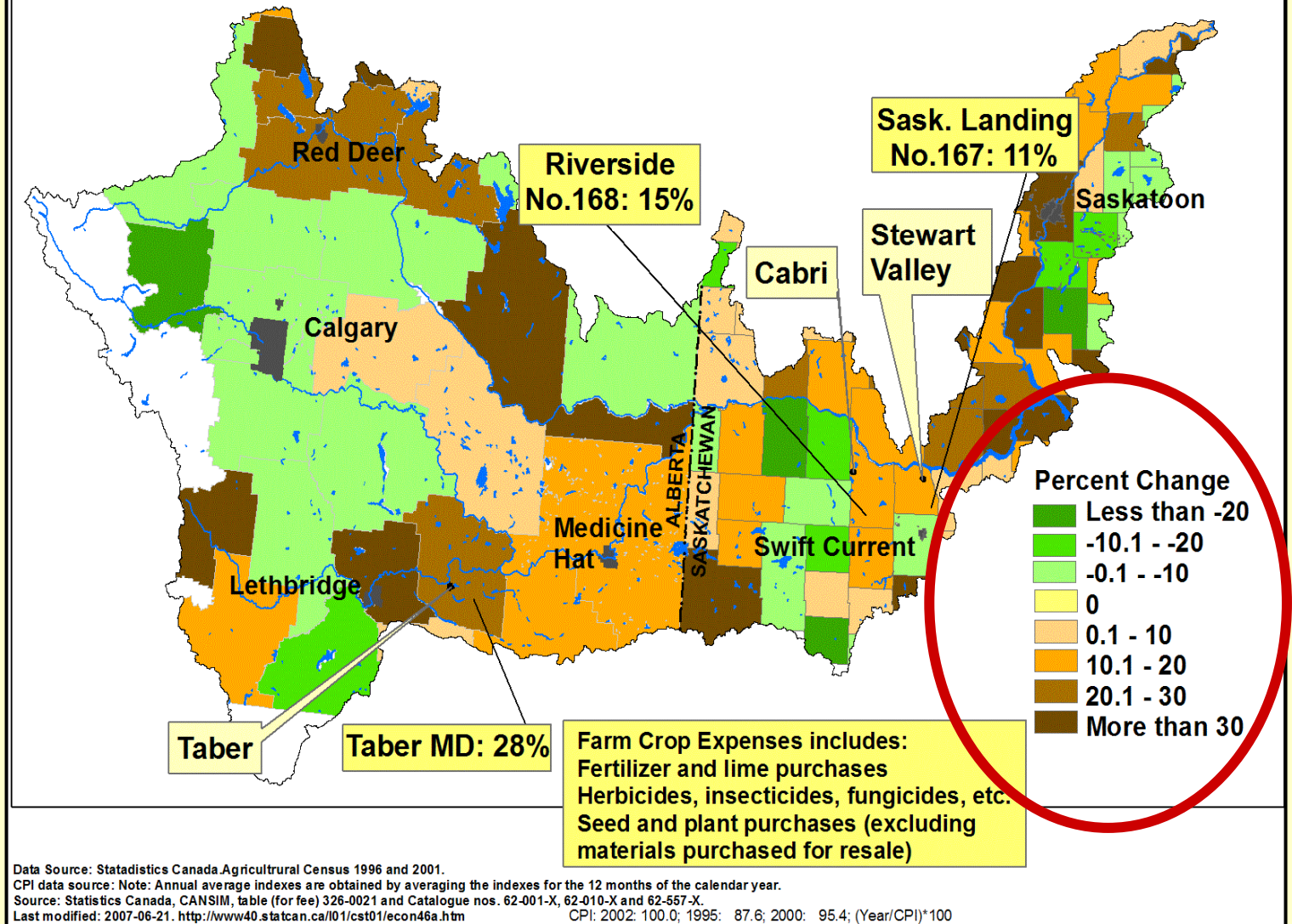


Data Source: Statadistics Canada.Agricultural Census 2001.

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

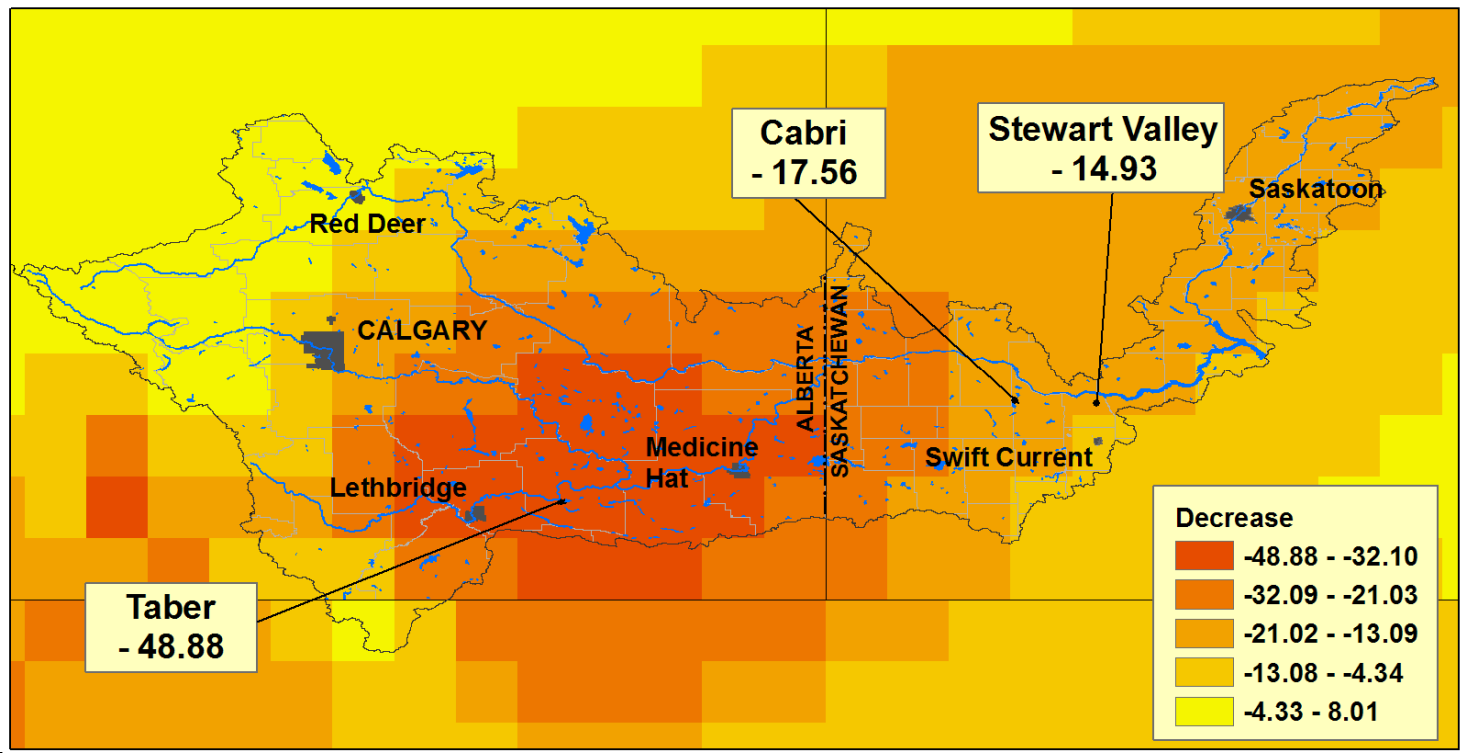
South Saskatchewan River Basin

Agricultural Land

Percent of Agricultural Land in Crop Land use.

include
Crop L
Summe
Land,
Tame, S
and
Natura
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

Cabri and Stewart Valley, December 6th, 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 2005 by Stephanie Jeanes. 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.

08:45 Coffee and muffins.

09:00 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.

09:15 Group discussion and development of community vulnerability scheme of the impacts of current climate related events on water. Split in 3 groups (max. of 5 - 7 people per group depending on the number of participants) for the rest of the day.

10:15 Refreshment break

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

11:15 Refinement of scheme of community vulnerability to climate, if necessary.

11:30 Presentation of potential impacts of future climate change on water.

12:00 Lunch (will be provided)

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

13:45 Discussion of the role of government institutions under potential impacts of future climate change on water.

14:30 Thank you and wrap up.