



Vulnerability and Adaptation to Climate Extremes in the Americas

Winter 2012

Inside this Issue

Page 1

Director's Message

Page 2

Stakeholder Meetings:
Swift Current, Saskatchewan
Taber and Pincher Creek, Alberta

Page 3

Swift Current Creek Watershed
Oldman River Basin

Page 4

Researcher Profile: Dr. Harry Diaz
Student Profile: Amber Fletcher

Page 5

Project Meeting: Manizales, Colombia

About VACEA

The overall objective of VACEA is to improve the understanding of the vulnerability of rural agricultural and indigenous communities to shifts in climate variability and to the frequency and intensity of extreme climate events, and to engage governance institutions in Canada, Argentina, Brazil, Chile and Colombia in enhancing their adaptive capacity to reduce rural community vulnerability.

The interdisciplinary research program will have three major themes:

- 1) Regional Vulnerability Assessment,
- 2) Climate and Agro-Ecological Variability,
- 3) Integrative Risk Analysis.

Director's Message

It has been a productive first nine months for the VACEA project. Much of the progress has been in the past five months. We have been collecting data from secondary sources, preparing the interviews that soon will be conducted in the communities, and creating frameworks for the effective management of the project and for interactions among researchers and with stakeholders and our external partners. This, our second newsletter, summarizes this activity.

On the following pages are details about some important project meetings held this past fall. The first meeting of the researchers from all five countries was held in early November in Manizales, Colombia, in the spectacular Chinchiná River basin. Events prior to and during the meeting revealed why our Colombian colleagues chose this watershed for the study of vulnerability to extreme events. Heavy rains prior to the meeting disrupted municipal water treatment and supply. In Manizales we saw the local people dealing with many days without water (the hotels were given priority). During the meeting, the weather was fine, although punctuated by the late afternoon thunderstorms that characterize tropical climates. The night before we left Manizales, we observed an intense storm from the shelter of our modern hotel. The next day we got the terrible news of a devastating and deadly landslide within the city.

In Canada key meetings were held in November with stakeholders in the Swift Current Creek and Oldman River watersheds. We were able to gather a great deal of information about impacts and perceptions of climate extremes, and other concerns, from stakeholders representing a cross-section of local interests and sectors of the economy. These important meetings would not have been possible without the generous support and assistance of our project partners, the Agri-Environmental Services Branch (AAFC), the Swift Current Creek Watershed Stewards, and the Oldman Watershed Council. I want to thank Darrell Corkall, Harvey Hill, Kim Hodge, Arlene Unvoas, Shannon Frank, Craig Gatzke and Dennis Lastuka. Also thanks to Brent Paterson, Director, Irrigation and Farm Water Division (AARD) for hosting a dinner meeting in Lethbridge so that the VACEA team and his research staff could discuss our common interests.

We look forward to working with all of our project partners over the coming months and years. Enjoy our warm winter, but let's hope we get some more snow or decent spring rain.

Dave



VACEA Stakeholder Meetings

Key Themes Reported by Stakeholders: Adaptation and Adaptation-Related Vulnerabilities and Needs

1.1. Theme: Information/Education

A crosscutting theme between all three stakeholder meetings was the need for weather and climate information, particularly information about future climate scenarios. This information was seen as crucial for agricultural planning. The participants would like:

- Assistance with identifying their specific vulnerabilities
- Integration of climate science with local knowledge, planning, and practice
- Ready-made tools they can use when climate extremes occur; tools to assist adaptation in the event of rapid changes in weather (e.g., drought one year, flood the next) would be especially beneficial
- Heavy emphasis on proactive planning for climate events
- The research team to communicate research outcomes with community stakeholders

They also are 1) concerned about research projects conducted without any interaction with community members, 2) frustrated about not being regularly informed about the progress and results of research in their area, and 3) emphasized the importance of integrating research results with policy.

1.2. Theme: Role of Government/Policy

Participants often expressed frustration over the timing of government assistance programs; they felt that program benefits arrive too long after the crisis at hand. There was a perception that, because drought is less quantifiable than flooding, drought receives less government response. Frustration was expressed over perceived short-term focus by governments; attendees emphasized the need to design adaptations with long-term extremes in mind. Pre-emptive policymaking: “do it before the fact”.

1.3. Theme: Economic and Social Aspects

Tools and strategies must be designed with current economic conditions in mind (understanding that agricultural economic conditions are variable and always in flux). Strategies must address social and community elements, such as family stress. There was general emphasis on building local capacity to adapt, identifying social vulnerabilities, etc. Rationing was a commonly suggested adaptation, but some introspection is required: what are individuals willing to sacrifice? A flower bed, for example? At what critical point are sacrifices made?

1.4. Knowledge Translation

The discussion of knowledge translation focused on:

- Local media: particularly newspapers, as an excellent way to report information to stakeholders. Participants suggested writing short articles with project updates, historical weather information (especially graphics and charts), personal stories that reflect weather concerns/adaptation, and information that fosters international connections (e.g., what is VACEA doing in the South American countries?)
- Continuous contact: the importance of continuous feedback with stakeholders; newsletters and articles were widely considered effective in this regard
- Knowledge mobilization: participants emphasize the need to act upon knowledge, to connect scientific research with local knowledge and strategies.

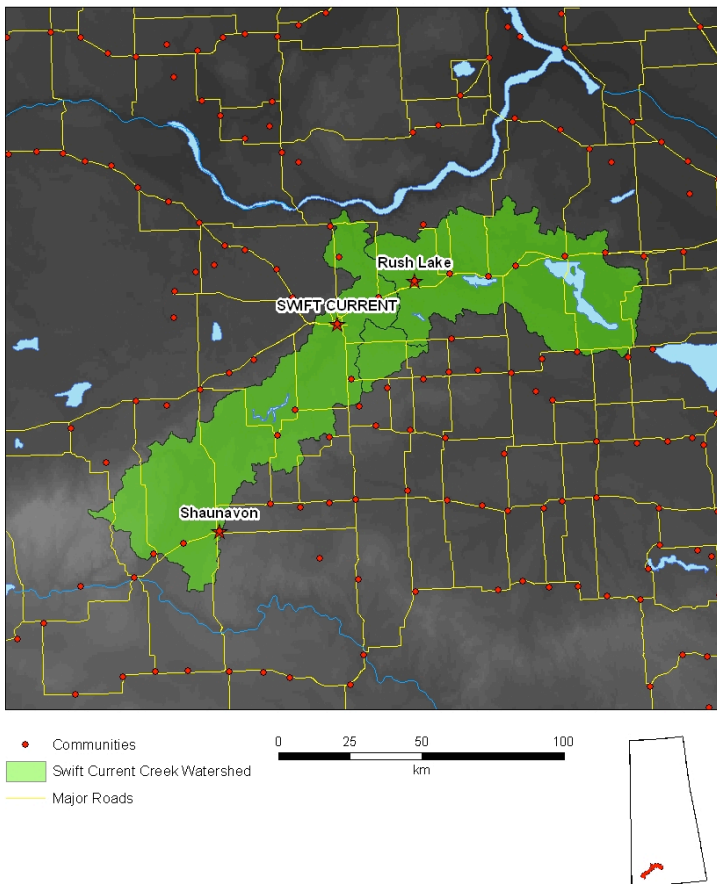


Swift Current, Saskatchewan



Taber, Alberta

VACEA - Swift Current Creek Watershed

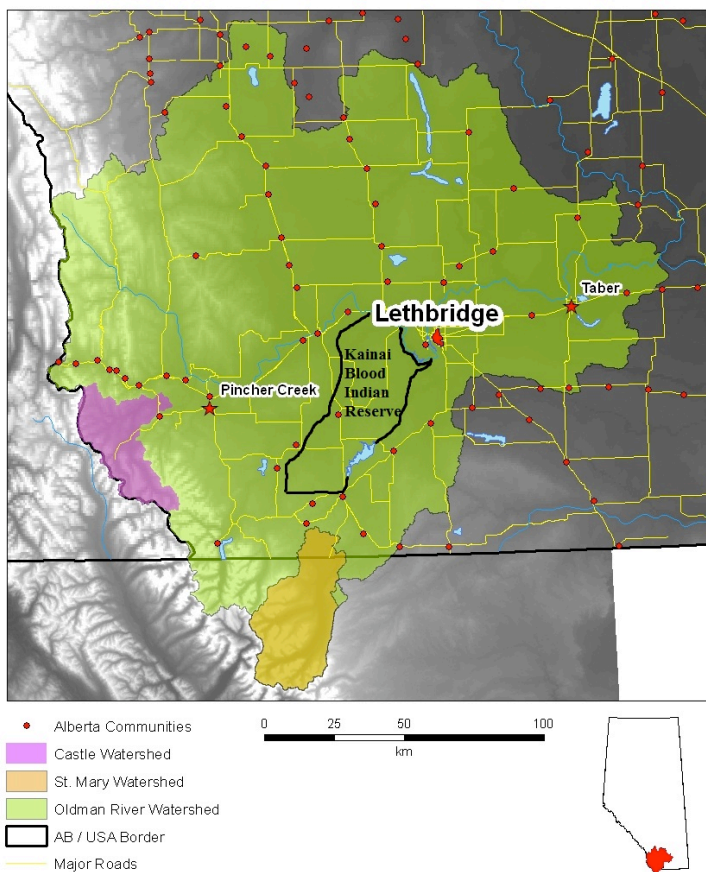


Swift Current Creek Watershed

The Swift Current Creek watershed covers an area of 5,592 km² in southwestern Saskatchewan. It relies on runoff from a prairie landscape where dryland agriculture, including grains, pulses, forage, and cattle, is dependent on spring and summer rain. With the dependence on rainfed agriculture, drought in the past has caused financial and social hardships.

The communities of Rush Lake and Shaunavon were selected for study in the Swift Current Creek Water Shed. VACEA researchers will be conducting interviews in these communities through February and March 2012.

VACEA - Oldman Watershed



Oldman River Basin

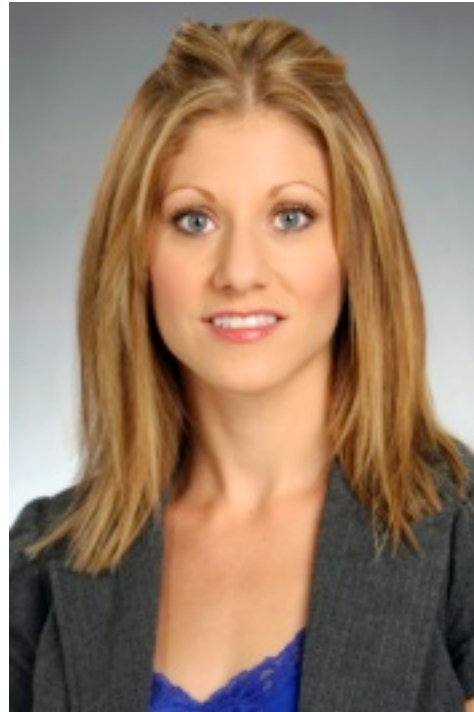
The 26,700 km² Oldman Watershed in southwestern Alberta was also chosen for study in the VACEA project because of its climatically sensitive agriculture production; however, in contrast to the Swift Current Watershed the Oldman is fed from the eastern slopes of the Rocky Mountains and the agricultural production relies heavily on irrigation. Therefore agricultural production in the Oldman River Basin also is affected by fluctuating and, in some years extreme, water levels.

Researchers will conduct interviews in the Taber, Pincher Creek, and Kainai Blood Indian Reserve regions of the Oldman Watershed. They will be out in the communities this April.



Researcher Profile: Dr. Harry Diaz

Dr. Harry Diaz is a sociologist. Within the VACEA project he coordinates the community vulnerability assessments in the two basins. In 1984 he obtained his PhD degree (Sociology) at York University. Since 1985 Dr. Diaz has worked as researcher and teacher at the Faculty of Arts of the University of Regina, where at present he is a full Professor in Sociology and Social Studies. He teaches primarily about environmental issues, social science methodology, social theory, and development. Between 2006 and 2011 he was the Director of the Canadian Plains Research Center (CPRC). Dr. Diaz has worked for several years in the area of rural vulnerability and adaptation to climate change in Canada and several Latin American countries. From 2004 to 2010 he was the Director of the Institutional Adaptation to Climate Change project, focusing on the institutional conditions that affect the process of adaptation in two dryland regions in Canada and Chile. Between 2007 and 2011 he participated as co-researcher in a similar project focused on the impact of climate variability on agricultural producers in Argentina, Bolivia, and Chile. At this moment Dr. Diaz leads a research project on the impact of droughts on rural communities in Saskatchewan.



Student Profile: Amber Fletcher

Amber Fletcher grew up on a grain farm near Kelvington, Saskatchewan, and has been determined to live in the prairies ever since. She holds a Bachelor degree (High Honours) in Women's Studies from the University of Regina and a MA in Women's Studies from York University, Toronto. She is currently completing an interdisciplinary PhD in Canadian Plains Studies at the University of Regina.

Amber's farm background has shaped her research interest. She studies how prairie farm women are affected by major changes in agriculture – specifically, policy changes and climate extremes. In the winter of 2011, Amber travelled around Saskatchewan to speak with farm women about their experiences. In March 2012, she will share what she has learned from farm women at the United Nations Commission on the Status of Women in New York.

Amber is a volunteer director for four community-based organizations across the province, including the Chair of the Women's Information Network of Saskatchewan (WIN-S), a rural-urban women's network. In 2011 she was awarded the Governor General's Youth Award in Commemoration of the Person's Case to recognize her work on gender equality issues.

VACEA Project Meeting

November 1-4, 2011

Manizales, Colombia

During early November 2011, most of the researchers on the VACEA project met for four days at the National University of Colombia (Universidad Nacional de Colombia) in Manizales. The objectives of this first full project meeting were to (a) agree on common methodological approaches to the scientific research, (b) discuss research activities and outcomes for the balance of year 1 and during year 2, and (c) further develop mechanisms for interaction between research teams, including cost effective strategies for subsequent meetings.

It was an important and successful meeting with agreement on a number of methodological issues and research strategies. It attracted the local media. The meeting was exceptionally well organized by Prof. Jorge Julián Vélez. He provided the visiting researchers from Canada, Brazil, Argentina and Chile with great hospitality and opportunities to see the Chinchiná River basin to view and discuss climate-related extreme events and local social and economic impacts. The tours included a visit to a coffee farm and the Nevado del Ruiz (5389m) the highest most active volcano in Colombia, where an eruption in 1985 created a lahar (volcanic debris flow) that killed 23,000 people.

Ironically and unfortunately, our project to study vulnerability to climate extremes coincided with heavy rains that disrupted the treatment and delivery water to the residents of Manizales (water was trucked to the hotels) and on November 6 (just before we departed for Canada) caused a landslide within the city that killed 45 people and left another 158 homeless. It was a direct and sad indication of the vulnerability of Colombians to extreme weather and climate.



Press Conference



Research team visiting a coffee farm



The main highway from Manizales to Bogata; floods and landslides frequently cause damage and deaths

Get more information about
the project on the VACEA
website: www.parc.ca/vacea

Contact Information

VACEA Project
#120, 2 Research Drive
Regina, SK S4S 7H9
Canada

Phone: 306-337-2300
Fax: 306-337-2301
Email: VACEA@parc.ca