



Agriculture and
Agri-Food Canada

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AAFC as a Boundary Organization to the Vulnerability and Adaptation to Climate Extremes in the Americas (VACEA) Research Project



AAFC as a Boundary Organization is a component of new and innovative research, enabling AAFC to encourage the transfer of knowledge from researchers to the agricultural sector. As a Boundary Organization, AAFC is addressing the gaps in knowledge transfer so that it can be used for agricultural sector adaptation and policy formulation. An interdisciplinary approach, using knowledge and expertise from both the physical and social sciences, the research hopes to discover new ways of addressing agricultural resource management problems caused by the effects of climate change/variability and the increasing competition for land and water resources. As a collaborator with the academic VACEA research, AAFC as a Boundary Organization has two main goals:

- advance the science and capacity to improve local-decision-making in agri-environmental adaptation to climate extremes, and
- determine appropriate AAFC roles to support and help inform local decision-making leading to stronger agricultural sector resilience.



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What is VACEA?

In June 2011, Canada provided \$2.5 million for the “Vulnerability and Adaptation to Climate Extremes in the Americas” (VACEA) research, led by the University of Regina and the University of Chile. The VACEA project is designed to assess regional climate variability and extremes and the resulting vulnerabilities of agricultural and aboriginal communities. The research framework actively engages stakeholders and directs all research activities towards evaluating past, current and future exposure, sensitivity and adaptive capacity, and applying this new knowledge to the design of improved adaptation strategies.



Goals and Objectives:

AAFC as a Boundary Organization has the following objectives:

- Engage and collaborate with stakeholders in the Swift Current Creek Watershed, Saskatchewan, and the Oldman River Basin, Alberta, Canada.
- Analyze historic climate data and trends affecting water and agricultural resources.
- Test and apply climate change and climate variability models to the resource base of the study areas.
- Assess the required agricultural adaptations related to water supply and water quality management.
- Provide information for dealing with extreme events (droughts, floods and storms) using decision support tools like the Land and Infrastructure Resiliency Assessment (LIRA).
- Investigate government and research organizational roles in the development of adaptive management practices.
- Link multiple stakeholders with the research science and local needs.
- Use the research to help guide the development and management strategies and apply findings to other Canadian regions.



Photo credit: Darrell Corkal, 2012

Knowledge and adaptive measures will be developed to help address climate and water management for agriculture and rural communities, engaging a multiplicity of stakeholders and government institutions. This collaboration is within the context of using integrated assessment approaches addressing agri-environmental issues and informing decision-makers with stronger evidence-based research to guide future projects, applicable to other regions of Canada.

For more information regarding the Vulnerability and Adaptation to Climate Extremes in the Americas (VACEA) research project please visit the project website: <http://www.parc.ca/vacea/>. This project is part of the International Research Initiative on Adaptation to Climate Change, funded by Canada's International Development Research Centre. The research is being conducted in Argentina, Brazil, Canada, Chile, and Columbia.