

Saskatchewan Watershed Authority

PRAIRIE REGIONAL ADAPTATION COLLABORATIVE

Development of an Interprovincial Drought Communication Framework



Saskatchewan
Watershed
Authority

PRAIRIE REGIONAL ADAPTATION COLLABORATIVE DEVELOPMENT OF AN INTERPROVINCIAL DROUGHT COMMUNICATION FRAMEWORK

October 2011
Project #1069-003

Citation:

Rescan. 2011. *Prairie Regional Adaptation Collaborative: Development of an Interprovincial Drought Communication Framework*. Prepared for Saskatchewan Watershed Authority by Rescan Environmental Services Ltd.: Saskatoon, Saskatchewan.

Prepared for:



Saskatchewan
Watershed
Authority

Saskatchewan Watershed Authority

Prepared by:



Engineers and Scientists

Rescan™ Environmental Services Ltd.
Saskatoon, Saskatchewan

Partner Organizations

Partner Organizations



Natural Resources Canada Ressources naturelles Canada

Canada



Saskatchewan
Watershed
Authority

Alberta

Freedom To Create. Spirit To Achieve.

Manitoba



Water Stewardship



University
of Regina

Acknowledgements and General Conditions

Acknowledgements and General Conditions

This report has been prepared by Rescan Environmental Services Ltd (Rescan) for the Saskatchewan Watershed Authority (SWA) on behalf of the partners of the Prairie Regional Adaptation Collaborative (PRAC). The Rescan team consisted of Jeremy Pittman (lead author and researcher) and Dr. Kent Gustavson (project management and technical review). Rescan would like to thank all those individuals who participated in the interviews and workshops conducted as part of this work for their valuable input to the report.

The report has been prepared for the specific objectives and purposes that were described to Rescan by the SWA. The applicability and reliability of any findings, recommendations, suggestions or opinions expressed in the report are only valid to the extent that there have been no variations from any of the descriptions outlined in the report. The information and opinion expressed in this report are for the benefit of SWA and its PRAC partner agencies. Any use that a third party makes of the report is the sole responsibility of such third parties.

The evaluations and conclusions contained in the report have been prepared on the basis of information provided to Rescan. Rescan has relied in good faith upon representations and information provided by others. Accordingly, Rescan cannot accept responsibility for any deficiency, misstatement, or inaccuracy contained in the report as a result of misstatements, omissions, misrepresentations or fraudulent acts of persons providing information.

The information, interpretations and conclusions in the report are based on the interpretation of conditions by Rescan revealed through limited investigation and research conducted within a defined scope of services. Rescan cannot accept responsibility for independent conclusions, interpretations or decisions of SWA or others that may be based on information contained in the report.

Table of Contents

PRAIRIE REGIONAL ADAPTATION COLLABORATIVE DEVELOPMENT OF AN INTERPROVINCIAL DROUGHT COMMUNICATION FRAMEWORK

Table of Contents

Partner Organizations	i
Acknowledgements and General Conditions	iii
Table of Contents	v
List of Figures	vi
List of Tables	vi
List of Appendices	vi
Glossary and Abbreviations	vii
1. Introduction	1-1
1.1 The Prairie Regional Adaptation Collaborative	1-1
1.2 Purpose of the Report	1-1
2. Method	2-1
3. Existing Communication	3-1
3.1 Informal Communication	3-1
3.2 Conferences and Workshops	3-1
3.3 Risk Management and Other Committees	3-2
3.3.1 Provincial-level Committees	3-2
3.3.2 Federal- and/or Interprovincial-Level Committees	3-3
3.4 Websites, Portals and Social Networking Tools	3-5
4. Communication Gaps and Needs	4-1
4.1 Prairie Drought Community of Practice	4-1
4.2 Coordination	4-1
4.3 Interprovincial Forums for Learning	4-1
4.4 Website and Portal	4-1
4.5 Sharing of Technical Tools	4-2
4.6 Directory of Practitioners	4-2
5. Proposed Framework	5-1

5.1	Goals and Intent	5-1
5.2	Coordination.....	5-1
5.2.1	General Structure	5-1
5.2.2	Role of the Water Stewardship Council	5-3
5.2.3	Other Groups to Involve.....	5-3
5.2.4	Lead Agencies	5-4
5.3	Addressing Gaps and Needs.....	5-4
5.4	Maintaining Momentum.....	5-4
5.5	Potential Barriers.....	5-5
References.....		R-1

List of Figures

FIGURE	PAGE
Figure 5.2-1. Proposed Coordination Structure for the Framework	5-2

List of Tables

TABLE	PAGE
Table 3.2-1. Conferences and Workshops that Facilitate Interprovincial Communication	3-1
Table 3.3-1. Provincial-Level Drought Committees	3-2
Table 3.3-2. Federal and/or Interprovincial-Level Drought Committees.....	3-3
Table 3.4-1. Websites, Portals and Social Networking Tools	3-5
Table 5.3-1. Recommendations to Address Gaps and Needs.....	5-4
Table 5.5-1. Potential Barriers and Strategies	5-5

List of Appendices

Appendix 1. Interview Materials
Appendix 2a. Workshop Objectives, Overview, and Participants
Appendix 2b. Materials Distributed Prior to Workshop
Appendix 2c. Workshop Presentation
Appendix 3. Websites of Interest

Glossary and Abbreviations

Glossary and Abbreviations

AAFC	Agriculture and Agri-Food Canada
CoF	Council of the Federation
DM	Deputy Minister
DPP	Drought Preparedness Partnership
DRI	Drought Research Initiative
IDT	Invitational Drought Tournament
MOU	Memorandum of Understanding
NAIS	National Agroclimate Information Service, within AAFC.
PIDWG	Prairie Interprovincial Drought Working Group
PPWB	Prairie Provinces Water Board
PPWB CoH	Prairie Provinces Water Board Committee on Hydrology
PRAC	Prairie Regional Adaptation Collaborative
the Framework	the Draft Interprovincial Drought Communication Framework
WWSC	Western Water Stewardship Council (now superseded by the Water Stewardship Council)
WSC	Water Stewardship Council

1. Introduction

1. Introduction

1.1 THE PRAIRIE REGIONAL ADAPTATION COLLABORATIVE

Funded by Natural Resources Canada, the Prairie Regional Adaptation Collaborative (PRAC) is a multi-jurisdictional and multi-agency program aiming to facilitate strategic and sustainable climate change adaptation within decision-making structures on the Prairies. Among the many PRAC-related projects is the development of a draft Interprovincial Drought Communication Framework (the Framework).

1.2 PURPOSE OF THE REPORT

The purpose of this report is to present all work that has been completed on the production of the Framework to date. This report serves to document the results of interviews and workshops conducted on the Framework under PRAC and present an analysis and recommendations for the structure and contents of the Framework.

2. Method

2. Method

This report draws on information collected from a subset of relevant stakeholders during interviews and breakout sessions. Interviews were conducted with six key informants from the Saskatchewan Watershed Authority, the Saskatchewan Ministry of Agriculture, Manitoba Water Stewardship, and Alberta Agriculture and Rural Development using a structured questionnaire (see Appendix 1). The goals of the interviews were to document existing drought-related communication, understand opportunities for improved interprovincial communication, understand potential roles and responsibilities of key agencies, and identify gaps and needs. Following the interviews, breakout sessions with key informants during the PRAC Joint Drought and Excessive Moisture and Water Theme Forum held September 21-22, 2011 in Winnipeg, were conducted (see Appendices 2a, 2b, and 2c). Participants were from the Saskatchewan Watershed Authority, Saskatchewan Ministry of Agriculture, Manitoba Water Stewardship, Manitoba Agriculture, Food and Rural Initiatives, Manitoba Conservation, Alberta Environment, Alberta Agriculture and Rural Development, Alberta Sustainable Resource Development, Natural Resources Canada, and Agriculture and Agri-Food Canada, as well as various NGOs, municipalities, and the research community (the Prairie Adaptation Research Collaborative and the International Institute for Sustainable Development). The objectives of the breakout sessions were to discuss and document: the goals and intent of the Framework, the coordination of interprovincial drought communication, and potential strategies for maintaining the momentum of past and present interprovincial drought-related initiatives. Results from the interviews and breakout sessions were synthesized in the production of this report on the draft Interprovincial Drought Communication Framework. Further engagement is likely required to ensure participation of all relevant stakeholders.

3. Existing Communication

3. Existing Communication

This section provides an overview of existing communication highlighted during interviews, including: informal communication; conferences and workshops; risk management and other committees; and websites, portals and social networking tools.

3.1 INFORMAL COMMUNICATION

There is currently informal communication between individuals within drought management agencies across the Prairie Provinces. In most cases, this communication has been facilitated by programs or existing committees with an interprovincial scope or focus. For instance, co-membership on operating interprovincial committees, such as the Prairie Provinces Water Board Committee on Hydrology (PPWB CoH), or participation in interprovincial forums, such as the Prairie Regional Adaptation Collaborative (PRAC) forums, have catalyzed informal communication and lead to the development of social networks. In some cases, these communication pathways and networks have been used for improved management of a broad range of issues, often expanding beyond the initial intent of the original committee or program through which the pathways were developed. Facilitating informal communication is integral to the success of an interprovincial framework; however, informal communication itself should not be solely relied upon since it is based on interpersonal relationships that lie outside of the mandate of the existing program or committee, which makes it vulnerable to staff changes and other uncertainties.

3.2 CONFERENCES AND WORKSHOPS

There are a number of conferences and workshops that were mentioned by respondents as being particularly useful in facilitating drought-related communication and learning across agencies (Table 3.2-1). These events have been mainly organized by public institutions, but some, as in the case of the Drought Research Initiative (DRI) Workshops, have also been organized by the research community. In any case, participation at the events usually includes a mix of provincial (from Alberta, Saskatchewan and Manitoba), federal, and academic representatives.

Table 3.2-1. Conferences and Workshops that Facilitate Interprovincial Communication

Conference or Workshop	Organizing Group	Description
Drought Research Initiative (DRI) Workshops	DRI	Annual events held from 2006 to 2011 that showcased DRI-related research and involved participants from government and the research community across the Prairie Provinces.
Invitational Drought Tournament (IDT)	Agriculture and Agri-Food Canada (AAFC)	Held once, in February 2011, with plans for further workshops. Provides a forum for multidisciplinary and interjurisdictional stakeholders to help identify drought vulnerabilities and opportunities to improve preparedness.
Drought Preparedness Partnership (DPP)	AAFC	Two have been held to date with provincial participants - one focusing on Saskatchewan (February 2009) and one on Manitoba (January 2010). The workshops facilitate the assessment of federal and provincial institutions' past drought responses and current response capacity.

(continued)

Table 3.2-1. Conferences and Workshops that Facilitate Interprovincial Communication (completed)

Conference or Workshop	Organizing Group	Description
Prairie Regional Adaptation Collaborative (PRAC) Forums	PRAC	Multiple forums have been held or are planned between 2009 and 2012. A broad purpose is to foster enhanced interprovincial collaboration and communication related to climate change adaptation.
Western Water Stewardship Council (WWSC) Technical Workshop on Drought Preparedness and Watershed Governance and Planning	WWSC	Held once, in May 2009, and involved participants from western Canadian jurisdictions with the intent of catalyzing collaboration on drought preparedness.

There were two tools developed by Agriculture and Agri-Food Canada (AAFC) that were noted as being potentially useful in furthering interprovincial drought communication. Both of these tools provide a means of facilitating discussion during workshops around drought-related vulnerabilities, adaptation, and lessons learned for preparedness. These tools include the Drought Preparedness Partnership (DPP) and the Invitational Drought Tournament (IDT). The DPP is a facilitated scenario-based table top exercise aimed at identifying lessons learned from previously occurring drought, and the IDT is a hypothetical drought scenario pushing the limits of current coping capacity. The IDT also adds a gaming element, as teams compete to manage through the drought scenario as effectively as possible. Both tools would be useful in terms of furthering interprovincial drought communication and could provide interesting and cutting-edge activities during workshops.

3.3 RISK MANAGEMENT AND OTHER COMMITTEES

3.3.1 Provincial-level Committees

Committees associated with drought management exist in all provincial jurisdictions on the Prairies (Table 3.3-1). Although sometimes mandated differently, these committees, groups or teams generally have a common aim to compile and communicate relevant information to higher level decision-makers and often play a key role in drought management. They also serve as existing communication infrastructure that could be leveraged in interprovincial communication.

Table 3.3-1. Provincial-Level Drought Committees

Jurisdiction	Committee	Mandate	Membership	Drought Type
Saskatchewan	Internal Drought and Excessive Moisture Monitoring Committee	To monitor and update drought indicators on an ongoing basis to provide the Ministry of Agriculture with the necessary information to take appropriate actions to address drought conditions throughout the province.	Ministry of Agriculture, Saskatchewan Watershed Authority, Ministry of Environment, Saskatchewan Crop Insurance Corporation, and Agri-Environment Services Branch.	Agricultural

(continued)

Table 3.3-1. Provincial-Level Drought Committees (completed)

Jurisdiction	Committee	Mandate	Membership	Drought Type
Alberta	Drought Advisory Group	To document and compile the best possible external advice for government to address the short and long-term implications of drought and oversee the implementation of the Agriculture Drought Risk Management Plan.	Alberta Agriculture and Rural Development, Alberta Association of Municipal Districts and Counties, Agricultural Financial Services Corporation, Alberta Environment, Agriculture and Agri-Food Canada, and the livestock, crop and irrigated crop sectors	Agricultural
Manitoba	Extremes of Moisture Response Team	To provide regular updates on flood/drought conditions across Manitoba, assess the current and potential impacts of moisture conditions on livestock and crop production, and facilitate programming requirements.	Manitoba Agriculture, Food and Rural Initiatives, Manitoba Agricultural Services Corporation, with occasional participation from Agri-Environment Services Branch, Manitoba Water Stewardship, Infrastructure and Conservation.	Agricultural

3.3.2 Federal- and/or Interprovincial-Level Committees

There are numerous federal and/or interprovincial-level committees that focus, in part, on drought (Table 3.3-2). Federal-level committees, here, refer to committees whose membership is exclusively federal government employees. Interprovincial-level committees refer to those whose membership includes provincial government employees and also, potentially, other relevant agencies and federal partners. Interprovincial-level initiatives, in some cases, have been initiated by federal groups but are highlighted here for their role in interprovincial communication.

Table 3.3-2. Federal and/or Interprovincial-Level Drought Committees

Committee	Mandate	Membership
Climate Production Risk Committee	To proactively document and compile potential climate-related risks to agriculture across Canada.	Agriculture and Agri-Food Canada (AAFC)
Western Water Stewardship Council (WWSC) ¹	To develop, lead, and assist multijurisdictional collaboration and partnerships in areas of water stewardship.	Relevant provincial and territorial ministries, agencies and departments in British Columbia, Alberta, Saskatchewan, Manitoba, Yukon Territory, Northwest Territory, and Nunavut.
Water Stewardship Council (WSC)	To provide information and strategic advice to Premiers on key trends, issues and opportunities related to Canada's water resources, and to promote and implement the commitments of the 2010 Council of the Federation Water Charter.	Relevant provincial and territorial ministries, agencies and departments in Canada.

(continued)

¹ Has been superseded by the Canada-wide Water Stewardship Council as of June 2011.

Table 3.3-2. Federal and/or Interprovincial-Level Drought Committees (completed)

Committee	Mandate	Membership
Prairie Provinces Water Board Committee on Hydrology (PPWB CoH)	To investigate, oversee, review, report and recommend on matters pertaining to hydrology of interprovincial or interjurisdictional basins under the direction of the PPWB.	Environment Canada, AAFC, relevant provincial ministries and agencies in Alberta, Saskatchewan and Manitoba.
International Souris River Board	To assist the International Joint Commission in preventing and resolving disputes relating to transboundary waters of the Souris River basin.	Environment Canada, US Geological Survey, US Army Corps of Engineers, US Fish and Wildlife Service, relevant provincial and state ministries, departments and agencies in Saskatchewan, Manitoba and North Dakota.
Mackenzie River Basin Board	To create a cooperative forum to inform about and advocate for the maintenance of the ecological integrity of the entire Mackenzie watershed.	Environment Canada, Aboriginal Affairs and Northern Development Canada, Health Canada, relevant provincial and territorial ministries, agencies and departments in British Columbia, Alberta, Saskatchewan, Northwest Territories and Yukon Territory, and other key stakeholders.
Prairie Regional Adaptation Collaborative (PRAC) Steering, Coordination and Theme Committees	To oversee the implementation of PRAC projects and foster interprovincial collaboration in the Prairie Provinces for climate change adaptation.	Natural Resources Canada and relevant provincial ministries and agencies in Alberta, Saskatchewan and Manitoba.

There are two main existing committees that could be leveraged to further interprovincial drought communication. The first, and likely most appropriate, is the Water Stewardship Council (WSC). The WSC is well situated to promote interjurisdictional and interdisciplinary projects dealing with a number of water-related issues, drought included. Furthermore, the WSC is also uniquely situated politically and answers directly to the Council of the Federation (CoF), giving them a political advantage. There are two challenges for interprovincial communication with the WSC, however. The first is that the WSC membership extends beyond the Prairies. WSC membership includes all provincial and territorial jurisdictions in Canada, which may dilute the focus on interprovincial drought communication in the Prairie Provinces. This concern could be readily addressed, however, by creating a sub-working group of the WSC that can deal specifically with Prairie drought. Secondly, during interviews and focus groups issues were raised regarding awareness of the WSC and its mandate. Some respondents had not yet heard of the group or its predecessor, the Western Water Stewardship Council (WWSC). The current operation of the WSC has been confirmed by its membership. These perceptions of the WSC, however, make apparent the need for the group to spread awareness of its activities, a task that could be complemented by emerging as a leader in interprovincial drought communication.

The second existing committee that may be leveraged in advancing interprovincial communication is the Prairie Provinces Water Board Committee on Hydrology (PPWB CoH). This group includes experts in water management from the three Prairie Provinces and federal agencies. The focus of this group, however, is entirely technical and hydrology-based, excluding specific expertise in policy and other relevant disciplines. The PPWB CoH plays an integral role in addressing interprovincial issues that may result from drought, but they are likely not the best fit for interprovincial communication.

3.4 WEBSITES, PORTALS AND SOCIAL NETWORKING TOOLS

There were numerous websites, portals, and social networking tools identified during the interviews that facilitated drought-related communication, provincially and interprovincially (Table 3.4-1; Appendix 3). Any of these could be built upon by or integrated within the Framework.

Table 3.4-1. Websites, Portals and Social Networking Tools

Name	Description	Geographic Scope
Climate Change Adaptation Community of Practice	An interactive online community of Canadian climate change adaptation practitioners that facilitates discussion and dissemination of the latest research and thinking around climate change adaptation in Canada.	National
Drought Research Initiative (DRI) Legacy	Contains research products (e.g., datasets, reports, presentations) associated with a past project aiming to better understand the physical characteristics of and processes influencing Canadian Prairie droughts.	Prairie Provinces
North American Drought Monitor	A portal for the dissemination of drought monitoring products developed through collaboration of drought experts in Canada, the United States and Mexico.	North America
Drought Watch	A portal for the dissemination of drought monitoring products developed by Canadian drought experts in the National Agroclimate Information Service (NAIS).	National
Ropin' the Web	Official website of Alberta Agriculture and Rural Development. Designed to deliver current information, services, tools and resources for Alberta agricultural producers.	Alberta
AgroClimatic Information Service	An interactive tool that disseminates weather and climate information to Alberta's agricultural producers.	Alberta
SaskAdapt	Designed as a decision-support tool for climate change adaptation in various sectors that provides access to the latest climate change information and approaches to self-administered vulnerability/adaptation assessments.	Saskatchewan

4. Communication Gaps and Needs

4. Communication Gaps and Needs

The interviews highlight a number of gaps or needs in terms of interprovincial drought communication. These include: interprovincial forums for learning; sharing of technical tools for drought assessment and management; the development of a Prairie Drought Community of Practice; the development of a website and portal for drought practitioners; and the development and maintenance of a directory of key practitioners.

4.1 PRAIRIE DROUGHT COMMUNITY OF PRACTICE

Recommendation 1: Develop a Prairie Drought Community of Practice.

A community of practice refers to a group of people sharing similar concerns or interests who have opportunities to learn from each other through regular interaction. In the context of Prairie droughts, a community of practice could be developed to facilitate learning using various media. The basis for a Prairie Drought Community of Practice was developed by the Western Water Stewardship Council (WWSC) during a previous workshop.

4.2 COORDINATION

Recommendation 2: Coordinate interprovincial drought communication through an existing interprovincial group, such as the WSC, and ensure representation from key federal departments.

The interviews highlighted two main needs in terms of coordination: to use an existing group; and to include federal representation. The use of an existing group for the Framework improves its efficiency and federal representation improves its capacity. The topic of coordination is dealt with in greater detail in Section 5.2.

4.3 INTERPROVINCIAL FORUMS FOR LEARNING

Recommendation 3: Organize annual or biannual interprovincial forums for learning.

Respondents noted the value of the various interprovincial forums that have occurred historically and identified the need for their continuation. It was suggested that annual or biannual is the proper frequency for such forums.

Recommendation 4: Utilize Agriculture and Agri-Food Canada (AAFC) decision-making tools, such as the Drought Preparedness Partnership Table-top Exercise or Invitational Drought Tournament Simulation Exercise, to facilitate learning.

The tools developed by AAFC to facilitate drought workshops - the Drought Preparedness Partnership (DPP) and Invitational Drought Tournament (IDT) - provide focused exercises with practical applications that can aid interprovincial communication. In addition, these tools have been tested and refined in Prairie contexts, making them ideal for the Framework.

4.4 WEBSITE AND PORTAL

Recommendation 5: Develop a website and portal to act as a 'one-stop shop' for Prairie drought.

Respondents noted the need to organize and disseminate all existing communication and information in one easy to use and access website. This website could also serve as the main platform for

interprovincial communication and be developed based on existing websites or from scratch. Many of the other recommendations (e.g., sharing of technical tools and directory of practitioners) could be served from this website.

4.5 SHARING OF TECHNICAL TOOLS

Recommendation 6: Share technical tools utilized by practitioners in Prairie jurisdictions for drought characterization and preparedness.

The sharing of technical tools related to drought management is an integral part of the Framework. This includes sharing drought-related indicators, planning processes, forecasting models, and other tools of interest. This communication could be readily integrated within a website or portal.

4.6 DIRECTORY OF PRACTITIONERS

Recommendation 7: Develop a searchable directory and database of individuals working on drought in the Prairies.

The development of a directory of drought practitioners is an effective and efficient way of facilitating communication both within and outside of a formal framework. It is recommended that the directory include contact information as well as information on the expertise of the individuals, in order to provide greatest utility. This communication could be readily integrated within a website or portal.

5. Proposed Framework

5. Proposed Framework

This section provides an overview of the proposed Interprovincial Drought Communication Framework (the Framework) based on interviews and workshop results. The section includes the recommended: goals and intent; coordination; ways to address gaps and needs; strategies for maintaining momentum; and potential barriers and ways to overcome them.

5.1 GOALS AND INTENT

The Framework should:

1. allow for the sharing of successes, challenges and lessons learned regarding drought adaptation;
2. increase adaptive capacity by building on existing institutional structures and initiatives;
3. develop indicators and/or metrics to monitor the success of drought adaptation;
4. provide guidance on integrating adaptation at the policy level;
5. identify gaps in knowledge and information requirements to improve adaptation success;
6. facilitate drought adaptation in existing jurisdictions by complementing jurisdictional policy; and
7. be reviewed and renewed regularly in order to maintain relevance.

The Framework should not:

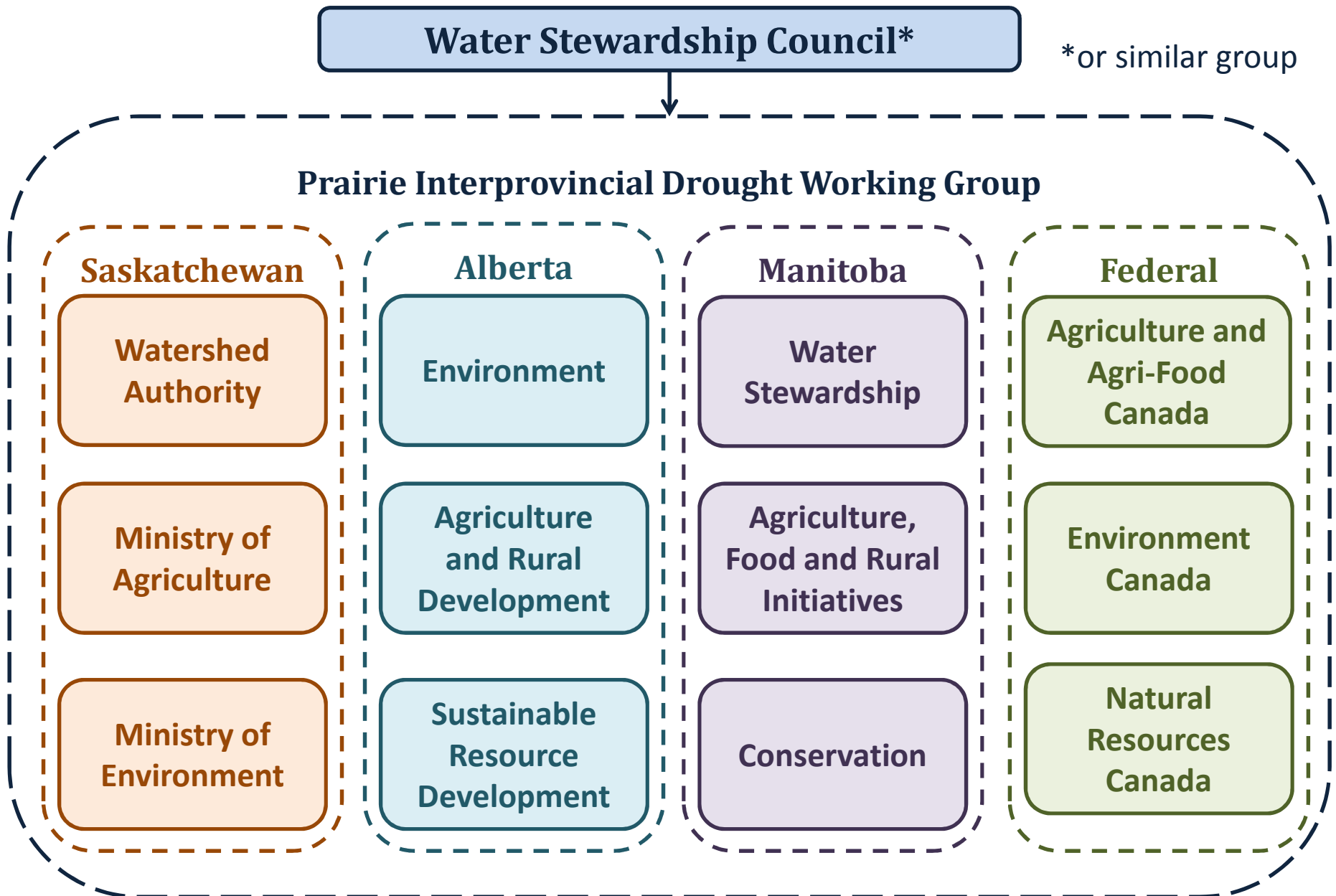
1. attempt to develop uniformity in drought policy across jurisdictions;
2. aim to compare levels of preparedness or vulnerabilities across jurisdictions;
3. attempt to share politically sensitive information; and
4. include other climate risks, at this time.

5.2 COORDINATION

5.2.1 General Structure

The proposed general structure for coordination of interprovincial communication can be found in Figure 5.2-1. It is suggested that the Watershed Stewardship Council (WSC) serve as the overarching group for coordination. Their focus on interdisciplinary and interjurisdictional water issues, as well as their political position, makes them an ideal group. Furthermore, the activities outlined in this report regarding information sharing and collaboration fit well within the Council of Federation Water Charter that guides the WSC (CoF 2010). Within WSC, it is recommended that a Prairie Interprovincial Drought Working Group (PIDWG) be created that includes representation of provincial and federal agencies working in the fields of water, environment, agriculture, and climate change. This would serve as the core group for interprovincial drought communication coordination, but this group could be expanded depending on emerging risks and needs (see Section 5.2.3). It is likely that the creation of the PIDWG would have to be championed jointly by provincial agencies from the Prairie Provinces represented in the WSC, such as the Saskatchewan Watershed Authority, Manitoba Water Stewardship and Alberta Environment, with the goal of obtaining broad WSC support. The recommendation to create the PIDWG could then be made to the CoF by the WSC upon receiving broad support.

Figure 5.2-1. Proposed Coordination Structure for the Framework



5.2.2 Role of the Water Stewardship Council

Broadly speaking, the role of the WSC in interprovincial communication is advice, support, and advocacy. The WSC can communicate directly with premiers and the Council of the Federation (CoF) on drought policy and programming. Much of this work should occur at the Deputy Minister level and include policy and operations perspectives. Other potential roles include: bringing forward recommendations to the CoF regarding drought policy; setting and updating priorities for interprovincial communication; keeping drought a priority for high level decision-makers; management and establishment of working groups; acting as the formal body for drought communication; and capacity building and institutional strengthening.

There are a number of specific tasks that could be coordinated through the PIDWG. These include:

- ensuring the sharing of information is done consistently;
- raising the profile of drought and interprovincial cooperation publically and within agencies;
- providing advice on basin-scale issues and concerns;
- developing and maintaining linkages with the Prairie Provinces Water Board (PPWB);
- providing guidance on integrating science into policy;
- sharing of information between provinces (i.e., preparedness, response and lessons learned)
- developing recommendations for standardized approach to planning;
- providing strategic direction for planning and implementation;
- identifying knowledge gaps, Issues and research needs;
- planning and coordinating learning events; and
- compiling and disseminating monitoring information.

5.2.3 Other Groups to Involve

The need to integrate a number of other groups was identified during the workshop. In particular, the provincial committees pertaining to drought could provide a conduit to gather and disseminate information more broadly. These groups can also play key roles in facilitating communication between relevant branches of the various provincial agencies involved.

Integration of stakeholders beyond government was another need highlighted during the workshop. Other relevant stakeholders include: watershed and other stewardship groups; conservation districts; private sector and industry; energy producers; water utilities; municipalities; and economic regions. It is recommended that these stakeholders are not a part of the PIDWG, but rather are engaged through the agencies comprising the PIDWG, to improve efficiency.

Interprovincial coordination could also benefit from the development of a technical advisory group that could interact with the PIDWG and answer technical questions that arise. This would provide an evolving interface between the research community and the drought management community, potentially serving to increase capacity.

Other specific federal and provincial agencies that could be included were those working in the fields of transportation, infrastructure, health, emergency management, and fisheries. In order to keep the size of the PIDWG manageable, it is recommended these additional agencies be included on an as-needed basis depending on the nature of emerging risks and needs.

5.2.4 Lead Agencies

The designation of lead agencies from each provincial and federal government was noted by workshop participants as an important part of coordination. Lead agencies could be rotated as appropriate based on the type of drought (i.e., meteorological, agricultural, hydrological, or socio-economic) being experienced or expected. This would ensure that the most relevant agencies are leading based on emerging needs.

5.3 ADDRESSING GAPS AND NEEDS

It is recommended that the Framework address the main gaps and needs identified during interviews. A summary of these is provided in Table 5.3-1. These recommendations would be aimed at the PIDWG, once established. For more information on the recommendations, see Section 4.

Table 5.3-1. Recommendations to Address Gaps and Needs

Number	Recommendation
1	<i>Develop a Prairie Drought Community of Practice.</i>
2	<i>Coordinate interprovincial drought communication through an existing interprovincial group, such as the Water Stewardship Council, and ensure representation from key federal departments.</i>
3	<i>Organize annual or biannual interprovincial forums for learning.</i>
4	<i>Utilize Agriculture and Agri-Food Canada decision-making tools, such as the Drought Preparedness Partnership Table-top Exercise or Invitational Drought Tournament Simulation Exercise, to facilitate learning.</i>
5	<i>Develop a website and portal to act as a 'one-stop shop' for Prairie drought.</i>
6	<i>Share technical tools utilized by practitioners in Prairie jurisdictions for drought characterization and preparedness.</i>
7	<i>Develop an easily searchable directory and database of individuals working on drought in the Prairies.</i>

5.4 MAINTAINING MOMENTUM

Maintaining the momentum generated by current and past projects will be an important part of ensuring success of the Framework in the future. During the workshop, participants identified numerous strategies for maintaining this momentum.

The use of existing, long-term institutional structures was noted as a potential way of dealing with uncertainty in short-term budgets and programs. Federal integration as a broker between agencies will help provide this consistency but would require more formal reporting processes between federal and provincial governments to ensure accuracy and consistency of messaging.

The development of specific mandates, legislation, or Memorandum of Understandings (MOUs) that are legally binding and provide firm commitments can help maintain interprovincial communication as a priority and ensure its continuation. This also requires participation from senior decision-makers within government, probably most effective at the Deputy Minister level.

Broader public, academic, industry, and non-governmental organization (NGO) support could maintain momentum and provide a means of bridging across government cycles. This would likely require press releases, public forums and other media engagement. Exploring partnerships with industry and other stakeholders may also help address funding challenges; inclusion of these stakeholders in the community of practice can initiate and maintain communication and tap into a broad range of resources. In addition, the inclusion of a permanent technical group from the research community within the community of practice could provide some continuity through government cycles.

Finally, the workshop highlighted the need to document the successful outcomes of current projects with an interprovincial focus and disseminate these via various media.

5.5 POTENTIAL BARRIERS

There were numerous potential barriers to interprovincial communication highlighted during the workshop. Table 5.5-1 provides an overview of these, as well as noting potential strategies for overcoming them. Reoccurring themes in the barriers include: need for funding; need for champions; and need for adequate staff resources. Although not easily overcome, potential strategies to address these barriers include: formally integrating the Framework within department budgets and resourcing plans; ensuring efficiency in communication; and ensuring public awareness and participation.

Table 5.5-1. Potential Barriers and Strategies

Potential Barrier	Strategy for Overcoming
Lack of formal structures and resources	Add to existing budgets and facilitate strategic communication.
Lack of leadership/champion	Identify key individuals within partner agencies who can champion interprovincial communication within their groups.
Prairie Regional Adaptation Collaborative (PRAC) formally ends	Look for leadership outside of PRAC; need champion, resources, and prairie drought committee.
Travel restrictions on government personnel	Efficient relationship building - workshops and conferences are essential to educate key players and provide networking opportunities for adaptive capacity. Also need communication that does not depend on travel (i.e., websites, webinars).
Have the right people at the table	Clarity of purpose will help define who should be there.
Loss of key individuals because of reorganization, retirement, or change of employment	Develop mentorship opportunities and ensure practical tools, such as the directory of practitioners, are straight forward and accessible.
Government cycles and bureaucracy	Ensure greater public awareness and participation in the issues and communication.
Filtering/translation of government communications	Need high-level government involvement.
Timing in relation to other pressures/priorities	Need clear commitments from agencies.
Required participation of the same individuals on a numerous, and potentially overwhelming, amount of committees	Need strong leadership and specific outcomes that are not onerous.
Conflicting priorities and turf wars between agencies	Use consensus-based approaches to workshop aimed at reducing conflicts. Interprovincial communication in itself could help alleviate conflicts.
Funding cycles	Develop a community of practice and other tools that do not require funds once they are in place.
Requires continued updating of databases, websites, directories, and other tools. Also, requires people to plan and organize events.	Need dedicated staff to complete administration and technical activities. Potential opportunities for interns, summer students, and other entry-level staff.

References

References

CoF. 2010. *Water Charter*.

http://www.councilofthefederation.ca/pdfs/Water_Charter_Aug_4_2010.pdf (Accessed October 2011).

Appendix 1. Interview Materials

Appendix 1. Interview Materials

INTERVIEW OBJECTIVES

1. Identify existing communication
2. Understand opportunities for improved interprovincial communication
3. Understand potential roles and responsibilities of key agencies
4. Identify existing gaps and needs

INTERVIEW CONTACTS AND PARTICIPANTS

Table A.1-1. Individuals Contacted for and Participating in Interviews

Name	Agency	Participated
Jim Stalwick	Saskatchewan Ministry of Agriculture	No
Tony Szumigalski	Manitoba Agriculture, Food and Rural Initiatives	No
Bart Oegema	Saskatchewan Watershed Authority	Yes
Abul Kashem	Manitoba Water Stewardship	Yes
Elaine Fox	Manitoba Water Stewardship	Yes
Bob Harrison	Manitoba Water Stewardship	Yes
Isabel Simons-Everet	Alberta Agriculture and Rural Development	Yes
Lorne Tangjerd	Saskatchewan Ministry of Agriculture	Yes
Brian Yee	Alberta Environment	No
Werner Herrera	Alberta Environment	No
Brent Paterson	Alberta Agriculture and Rural Development	No
Sheila Nolan	Alberta Agriculture and Rural Development	No
Ralph Wright	Alberta Agriculture and Rural Development	No
Daniel Itenfisu	Alberta Agriculture and Rural Development	No
Tim Hyrinkiw	Saskatchewan Watershed Authority	No
Carolynn Osborn	Manitoba Agriculture, Food and Rural Initiatives	No

INTERVIEW GUIDE

1. What communication initiatives currently exist?
2. Which of these current communication initiatives could be communicated interprovincially?
3. Are there additional communication initiatives that could exist interprovincially? If so, please describe the additional initiatives.
4. For each initiative highlighted in questions 2 and 3, please fill out Table A.1-2 below:

Table A.1-2. Interprovincial Communication Framework

Initiative (from questions 2 and 3)	Who initiates this communication?	Who receives this communication?	When should this communication occur? (pre-drought, during drought, or post-drought)

Appendix 2a. Workshop Objectives, Overview, and Participants

Appendix 2a. Workshop Objectives, Overview, and Participants

WORKSHOP OBJECTIVES

1. Discuss the goals and intent of the Interprovincial Drought Communication Framework
2. Discuss potential coordination structure and roles
3. Discuss how can momentum be maintained

WORKSHOP OVERVIEW

Table A.2-1. Workshop Overview

Topic	Duration (approximate)	Method
Interview Results	15 minutes	Presentation
Goals and Intent	10 minutes	Plenary Discussion
Coordination	25 minutes	Breakout Discussion
Maintaining Momentum	25 minutes	Breakout Discussion
Reporting	15 minutes	Plenary Discussion
Total:	90 minutes	

WORKSHOP PARTICIPANTS

Table A.2-2. Workshop Participants

Government or Group	Last Name	First Name	Email
Manitoba	Bourne	Alexandra	Alexandra.Bourne@gov.mb.ca
Manitoba	Fox	Elaine	elaine.fox@gov.mb.ca
Manitoba	Horton	Brent	brent.horton@gov.mb.ca
Manitoba	Kashem	Abul	abul.kashem@gov.mb.ca
Manitoba	Kelln	Duane	duane.kelln@gov.mb.ca
Manitoba	Klos	Ryan	Ryan.Klos@gov.mb.ca
Manitoba	Kozera	Eugene	eugene.kozera@gov.mb.ca
Manitoba	Leach	Chris	chris.leach@gov.mb.ca
Manitoba	Little	Ainsley	ainsley.little@gov.mb.ca
Manitoba	Luo	Bin	bin.luo@gov.mb.ca
Manitoba	Osborn	Carolynn	carolynn.osborn@gov.mb.ca
Manitoba	Sales	Ramon	ramon.sales@gov.mb.ca
Manitoba	Stothers	Scott	Scott.Stothers@gov.mb.ca
Manitoba	Szumigalski	Tony	tony.szumigalski@gov.mb.ca
Manitoba	Shymko	Randall	randall.shymko@gov.mb.ca

(continued)

Table A.2-2. Workshop Participants (completed)

Government or Group	Last Name	First Name	Email
Manitoba	Walsh	Katy	katy.walsh@gov.mb.ca
Manitoba	Zdan	Terry	terry.zdan@gov.mb.ca
City of Brandon	Hargreaves	Lindsay	l.hargreaves@brandon.ca
City of Brandon	Keep	Tom	t.keep@brandon.ca
City of Winnipeg	Madden	Sean	smadden@winnipeg.ca
IISD	McCandless	Matthew	sswidinsky@iisd.ca
IISD	Parry	Jo-Ellen	jparry@iisd.ca
IISD	Swanson	Darren	dswanson@iisd.ca
IISD	Echeverria	Daniella	decheverria@iisd.ca
Alberta	Itenfisu	Daniel	daniel.itenfisu@gov.ab.ca
Alberta	Manteaw	Bob	bob.manteaw@gov.ab.ca
Alberta	Paterson	Brent	brent.paterson@gov.ab.ca
Alberta	Seneka	Michael	Michael.Seneka@gov.ab.ca
Alberta	Simons-Everett	Isabel	isabel.simons-everett@gov.ab.ca
Alberta	Stadt	John	John.Stadt@gov.ab.ca
Alberta	Tymstra	Cordy	cordy.tymstra@gov.ab.ca
PRAC	Barrett-Deibert	Pat	pat.barrett-deibert@uregina.ca
Saskatchewan	Funk	Dolores	dolores.funk@swa.ca
Saskatchewan	Harrison	Tom	tom.harrison@swa.ca
Stewardship	Kindrachuk	John	aegp@redberrylake.ca
Research	Sauchyn	Dave	sauchyn@uregina.ca
Saskatchewan	Tangjerd	Lorne	Lorne.Tangjerd@gov.sk.ca
Research	Thorpe	Jeff	thorpe@src.sk.ca
Research	Wittrock	Virginia	wittrock@src.sk.ca
Industry	Pittman	Jeremy	jpittman@rescan.com
Federal	Fedeniuk	Stella	stella.fedeniuk@agr.gc.ca
Federal	Hanuta	Irene	irene.hanuta@agr.gc.ca
Federal	Horton	Brian	brhorton@nrcan.gc.ca
Federal	Wilson	Mary-Ann	Mary-Ann.Wilson@nrcan.gc.ca

Appendix 2b. Materials Distributed Prior to Workshop



For discussion re Day 2 Agenda item: Inter-provincial Drought Communication Framework

Goals and Intent



- An Interprovincial Drought Communication Framework **should**...
 - What are realistic goals for an Interprovincial Drought Communication Framework?
- An Interprovincial Drought Communication Framework **should not**...
 - What specifically should an Interprovincial Drought Communication Framework not try to achieve?

Breakout 1: Coordination



- What role should Western Water Stewardship Council (or a similar group) have in interprovincial drought communication?
- Are there other agencies or groups that should be involved?
- Should lead agencies from each jurisdiction (AB, SK, MB and Federal) be chosen?
- If so, who should be the lead agencies?

Breakout 2: Maintaining Momentum



- Multiple groups and initiatives have catalyzed interprovincial communication, but many of these have reached their end.
 - How can momentum be maintained?
 - What barriers to interprovincial communication exist?
 - How can we overcome these barriers?

Appendix 2c. Workshop Presentation



INTERPROVINCIAL DROUGHT COMMUNICATION FRAMEWORK DRAFT FOR DISCUSSION



Saskatchewan
Watershed
Authority

Purposes of Session



- Present preliminary results from interviews on interprovincial communication gaps and needs
- Receive group feedback on goals and intent, coordination, and strategies to maintain momentum

Existing Interprovincial Communication



- Informal (i.e., between individuals)
- Conferences & workshops (i.e., AAFC, DRI, PRAC)
- Risk management & other committees (i.e., provincial and federal-level, WWSC)
- Websites & portals (i.e., DRI legacy, CCACoP)

Gaps and Needs



- The interviews identified the need for:
 - A Prairie Drought Community of Practice
 - An overarching coordination committee for interprovincial communication
 - Continued interprovincial forums and workshops

Gaps and Needs (cont'd)



- The interviews identified the need for:
 - A directory of practitioners working on drought in the Prairies
 - Sharing of technical tools
 - Development of a 'one-stop shop' website for Prairie drought that could house many of the tools

Goals and Intent



- An Interprovincial Drought Communication Framework **should**...
 - What are realistic goals for an Interprovincial Drought Communication Framework?

Goals and Intent



- An Interprovincial Drought Communication Framework **should not**...
 - What specifically should an Interprovincial Drought Communication Framework not try to achieve?

Coordination



- Need for overarching committee
- Requires federal & provincial membership and expertise
- Potential structure (next slide)

Western Water Stewardship Council*

*or similar group

Prairie Interprovincial Drought Working Group

Saskatchewan

**Watershed
Authority**

**Ministry of
Agriculture**

**Ministry of
Environment**

Alberta

Environment

**Agriculture
and Rural
Development**

**Sustainable
Resource
Development**

Manitoba

**Water
Stewardship**

**Agriculture,
Food and Rural
Initiatives**

Conservation

Federal

**Agriculture and
Agri-Food
Canada**

**Environment
Canada**

**Natural
Resources
Canada**

Breakout 1: Coordination



- What role should WWSC (or a similar group) have?
- Are there other agencies or groups that should be involved?
- Should lead agencies from each jurisdiction (AB, SK, MB and Federal) be chosen?
- If so, who should be the lead agencies?

Breakout 2: Maintaining Momentum



- Multiple groups and initiatives have catalyzed interprovincial communication, but many of these have reached their end.
 - How can momentum be maintained?
 - What barriers to interprovincial communication exist?
 - How can we overcome these barriers?

Next steps



- The results from this discussion will be synthesized by Rescan Environmental Services Ltd. into a proposed Interprovincial Drought Communication Framework for delivery to the Saskatchewan Watershed Authority as a key deliverable of the PRAC project.

Thank you!



Jeremy Pittman

Social and Economic Scientist
Rescan Environmental Services Ltd.
Saskatoon, SK

T: +1 306 651-3868

jpittman@rescan.com



Appendix 3. Websites of Interest

Appendix 3. Websites of Interest

Table A.3-1. Websites, Portals and Social Networking Tools

Name	Web Address
Climate Change Adaptation Community of Practice	http://www.ccadaptation.ca/?signin
DRI Legacy	http://www.drinetwork.ca/legacy.php
North American Drought Monitor	http://www.ncdc.noaa.gov/temp-and-precip/drought/nadm/
Drought Watch	http://www4.agr.gc.ca/DW-GS/current-actuelles.jsp?lang=eng&jsEnabled=true
Ropin' the Web	http://www.agric.gov.ab.ca/app21/rtw/index.jsp
AgroClimatic Information Service	http://www1.agric.gov.ab.ca/\$department/deptdocs.nsf/all/cl12944
SaskAdapt	http://www.parc.ca/saskadapt/