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Disaster Research Center

PRELIMINARY PAPER
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CROSS-BORDER ISSUES IN DISASTER RESPONSE

Tricia Wachtendorf

1999

Red River Basin Disaster Information Network
On-Line Workshop
August 26, 1999 -- 12:00 Noon CST

Cross-Border Issues in Emergency Response

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Online Transcript
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Text Transcript

Natural disasters generally do not respect political boundaries, however, emergency management is usually organized by political jurisdiction. This presents significant challenges to coordinating an effective response on a regional basis. It is usually difficult enough to coordinate activities between local jurisdictions, but when an international border is involved, the challenge may become even greater. Our August Workshop looked at some of these issues.

First, Tricia Wachtendorf, a Manitoba resident and doctoral candidate at the University of Delaware shared her research findings from her recently completed study "A River Runs Through It: Cross-Border Interaction During The 1997 Red River Flood." (***Abstract***)

The second half of the workshop, Cheryl Moate, Acting Executive Coordinator for the Manitoba Emergency Management Organization, introduced an institutional framework for addressing these issues, the Prairie Regional Emergency Management Advisory Committee (PREMAC), organized under a bilateral agreement between the two nations. (***Summary***)
Canada/United States Agreement on Emergency Planning

About Tricia Wachtendorf
Tricia Wachtendorf received her Bachelor of Arts from the University of Manitoba and is currently pursuing her Ph.D. in Sociology at the University of Delaware. She is also a research assistant for the Disaster Research Center at the University of Delaware. As part of her Masters Thesis, she conducted research on the 1997 Red River Flood. Her thesis focused on cross-border interaction between Canada and the United States during this disaster. Her research interests include transnational emergencies, disaster vulnerability, emergency management and policy, and disaster popular culture.
Tricia Wachtendorf Home Page
Disaster Research Center Home Page

About Cheryl Moate
Cheryl Moate is the Acting Executive Coordinator for the Manitoba Emergency Management Organization (MEMO) and was the Recovery and Finance Coordinator responsible for the recovery coordination of the 1997 Red River Valley Flood of the Century. She also serves as the Chairperson, Technical Committee, responsible for the coordination and development of the provincial/territorial consensus on Disaster Financial Assistance Arrangements (DFAA), and Chairperson, Technical Recovery Committee, 1999 Western Manitoba Flood, responsible for the coordinated recovery to assist

Manitoba citizens adversely affected by the 1999 flooding and heavy rains in Western Manitoba.

Manitoba Emergency Management Organization Home Page

Edited Transcript

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Amy Sebring, Moderator
EIIP Technical Projects Coordinator

Amy Sebring: Good afternoon, and thank you all for joining us in the Red River room of the EIIP Virtual Forum.

First, a quick review, since we will be using a few "slides" today. When you see a blue Web address, you can click on it and the referenced Web page should appear in a browser window. After the first one, the browser window may not automatically come to the top, so you may need to bring it forward by clicking on a button at the status bar at the bottom of your screen.

Please do not use Direct Messaging to our guests or the Moderator, because it makes it more difficult to follow the discussion.

We have a great deal of information to cover today. You will have an opportunity to ask questions during this session, afterwards in open discussion, or email follow up. Background information for today's session may be found at http://www.emforum.org/redriver/workshop/wk990826.htm .

Today we have two speakers and will have about 10 minutes Q&A after each one. An approximate agenda may be found at http://www.emforum.org/redriver/workshop/ag990826.htm . I will introduce our speakers at the beginning of each section.

First, joining us from the University of Delaware Disaster Research Center is network member Tricia Wachtendorf. As part of her Masters Thesis, she conducted research on the 1997 Red River Flood focusing on cross-border interaction between Canada and the United States. An abstract of the study is posted at http://www.emforum.org/redriver/workshop/abstract.htm . She has recently defended her thesis successfully, and we have invited her to share her findings with us today. Welcome Tricia.

Tricia Wachtendorf Presentation

Tricia Wachtendorf: Thanks Amy, and good afternoon everyone.

Amy asked me to present some of the research I've been conducting in the Red River Valley over the last 2 years. I do want to leave some time for questions and discussion, so I will briefly gloss over just some of my major findings. If there is an area you would like to know more about or would like more specific examples, I'll be happy to give more detail during the discussion.

My research project specifically looked at cross-border interaction between Canada and the US during the warning and response phases of the 1997 Red River flood. Most of the research on intergovernmental coordination during an emergency concentrates on interrelations between different levels of government within a single country. I wanted to find out if these findings hold true in a transnational disaster, or if the transnational nature of the event changes the interaction.

I conducted three field trips after the flood: First in May- June 1997, again in October 1997, and finally in December 1997-January 1998. During these trips, I conducted interviews with 62 key federal, state/provincial, municipal, business, and non-profit representatives from both Canada and the United States. My findings were are based on document research such as cross-border agreements, response, plans, reports, maps, historical data, news articles, and so on. Four major concepts emerged in my research (SLIDE ONE PLEASE)

http://www.emforum.org/redriver/workshop/interact.htm

Tricia Wachtendorf: These include:
1) The degree of informational and response implementation dependency;

2) Whether or not the countries utilize formal and informal processes in their decision making and communications;

3) The extent to which standardization inconsistencies affect the disaster response;

4) Whether cross-border interaction occurs primarily between centralized emergency organizations or decentralized agencies involved in flood-fighting efforts.

Let me start with Dependency. Dependency between Canada and the US was multi-directional. That is, in some cases, Canada depended on the US, other times, the US depended on Canada, and finally there were instances were the countries were interdependent. Departments dependent on each other during non-crisis times were often those dependent on each other during the disaster. Although cross-border personnel and materials were provided, departments were more dependent on each other for information than for their response implementation or decision-making.

In terms of Formalization, formalized boards and councils, even those that were not related to the Red River -- such as The Central North American Trade Corridor Association -- provided a good

network-building opportunity in the pre-crisis period that facilitated interaction during the flood. However, due to time constraints and requests to participate on multiple boards, many respondents felt that they could not commit to regular participation. Cross-national boards should not unduly impede upon participant's time or other activities, but instead they should be limited in number and focused to maximize participation across agencies and ensure effective planning and networking.

Although formal agreements and manuals facilitated interaction, many respondents were still concerned that added formality might create problematic bureaucracy. Instead, respondents felts that formal agreements need to be seen as enabling documents, and need to provide structure while still allowing for flexibility. Some departments that didn't have manuals saw a need for their existence, but stated that any available time was devoted to operations, not documentation. Many of these organizations need added support to ensure contact and procedural manuals are in place.

Informal interaction during the disaster typically took place between those who interacted during non-crisis times. Trust, getting to know one's counterparts, and informality were seen by respondents as assets, and respondents favored direct interaction with their counter-parts over having to go through "middle-men" for information and resources.

Finally, interaction during the Red River Flood sometimes established or enhanced existing informal cross-border relationships.

Now I'll move on to Standardization. In my research, I examined 10 areas of inconsistency in standardization between Canada and the US. (SLIDE 2 PLEASE).

http://www.emforum.org/redriver/workshop/standard.htm

Tricia Wachtendorf: I won't go into detail on each of these points, but let me highlight just a few. As most of you know, Canada and the US use different units of measurement. Also, the manner in which hydrologist report the prediction to the public is perhaps the most significant difference between the Canadian and the American hydrology systems.

While the National Weather Service issues one number--- a best estimate prediction --- Canada reports three predictions: the best estimate as well as the lower and upper deciles. This probabilistic forecasting method includes the 10% likelihood of the best case scenario --- based on ideal weather conditions --- and the 10% likelihood of the worst case scenario, based on adverse weather conditions.

Equally important are the differences in the weight allowed on connecting Canadian and American roads. Commercial truck traffic rerouting during the flood required careful coordination. Although a truck carrying a given weight was allowed to travel on a particular Canadian road, it was not necessarily permitted to travel on the connecting U.S. road. The same is true vice versa. Through proper planning and communication, highways and customs agencies tried to ensure trucks did not take the wrong route only to find their vehicles could not travel on that road across the border.

Even though flood responders provided equal property protection within the cross-border dike at Emerson and Pembina, another standardization issue --- the source of electrical power --- led to

property damage disparities between Canadian and American households. This flood responder recalled:

> *"Their power comes from a US utility company ... So their basements got wet, not because of lack of dike protection. Their basements got flooded because there was no power to run their sup-pumps. They got three or four feet of water in their basements. We had power. If they would have been connected to our power source, their basements probably would have been dry too."*

Minnesotan houses within the Emerson/Noyes dike experienced basement water damage, while in contrast Manitoban houses, which still had power provided to them, did not suffer the same repercussions.

Although inconsistencies in standardization can impede effective disaster response, they do not necessarily need to if:

1) The relevant organizations are aware of the inconsistencies;

2) If they are aware of the potential consequence these inconsistencies pose; and

3) If they take steps before the disaster strikes to deal with these issues.

I should also note that inconsistencies in standardization in one area can directly or indirectly impact the general public and organizations in other areas. Both of these groups should be taken into account when dealing with standardization issues.

Finally, I'll very briefly gloss over Centralization of Interaction. Information-based interaction was mostly decentralized; that is, it primarily took places between operational departments instead of between centralized EOCs or emergency management agencies. Information about cross-border interaction did not always flow back into the EOC and as result, organizations often under or over estimated the amount of interaction that took place between other departments and their counter-parts.

That's just a quick summary of some of my findings. A full copy of my thesis will be available in a few weeks online at `http://udel.edu/~twachten/`. At this time I would like to open things up for questions or discussion.

Amy Sebring: Thank you Tricia. We will now take about 10 minutes for questions/comments. Please send in just a question mark (?) to indicate you wish to be recognized, go ahead and compose your comment or question, but wait for recognition before hitting the Enter key or clicking on Send. We now invite your questions or comments for Tricia and give you a moment or two to think.

Amy Sebring: (Cam and Harold are sharing a machine today)

Question:
Harold Clayton: Tricia, could you expand on the loss of power in the in Minn. We understand there was a grid, that MB Hydo had a grid system to provide services to them.

Tricia Wachtendorf: Are you asking about the loss of power in Noyes, or the loss of power in North Dakota and MN after the ice storm?

Harold Clayton: Yes, about Noyes.

Tricia Wachtendorf: I actually had conflicting accounts of that situation. Some respondents stated that MN shut the power off, others stated that a power line was down and Manitoba was not allowed to assist. In the end however, a number of basements on the MN side were flooded while MB houses within the same dike remained dry. MB, however, was responsible for manning the pumps and supplying power to those on both sides of the border within the dike.

Harold Clayton: Nobody here was aware of Manitoba not being allowed to transfer power. We were not aware of this situation. It would be interesting to know where that originated.

Question:
Amy Sebring: Not to put you on the spot Tricia, but do you have an overall assessment of the coordination, perhaps as relative to an ideal? Poor? Fair? Good?

Tricia Wachtendorf: I think that the right answer is not always that simple Amy. I think there was very good coordination overall, particularly because many groups took measures before the disaster struck to deal with problems of standardization, agreements, etc. There is also a very good working relationship between many cross-border counter-parts.

On the other hand, there are a number of things (that I outline in further detail in my thesis), that need to be put in place to facilitate the timing of information flow, add support to organizations, and ensure that there is an better awareness of the interaction between other org. and their counter-parts.

Question:
Avagene Moore: Tricia, first of all I look forward to reading your thesis. How did the media impact the disaster coordination effort?

Tricia Wachtendorf: The media played a very important role in transferring information cross-border. Manitoba was dependent on American media for information because: 1) they informed organizations and the public about the flood's severity; and 2) they showed Manitobans what they could anticipate.

Organizations reported they "could not afford to have another Grand Forks." Manitoba was able to use the destruction in Grand Forks as a warning. They could relate to the damage, as many Manitobans were familiar with Grand Forks landmarks, but they could distance themselves from the disaster by contending it "would not happen to us." Organizations were able to point to Grand

Fork's losses and convince people who had not yet adequately prepared for the event of the flood's severity.

Question:
Christina Edwards: Do you think that there were too many organizations trying to coordinate efforts across the border? In some of my research there are often competing groups trying to control things and it ends up being a bigger mess.

Tricia Wachtendorf: As I said in the presentation, most of the interaction took place between departments and their counter-parts --- this is a good thing as they have a working relationship during non-crisis times. One of the problems, however, is that other departments don't always know what the other is doing, and therefore, proper support is not always provided. I think competition was more of an issue within state or province than cross-borer.

Question:
Amy Sebring: Tricia, I understand you have some examples of Canadian and American 'multi-directional dependence' for us? Can we finish up this segment with that please?

Tricia Wachtendorf: Sure, Amy. As the flood hazard was moving north, Canada was dependent on the United States for accurate water level data and information on environmental threats traveling north with the river. A mutual dependence on coordination and receiving up-to-date information resulted between customs, departments of transportation, and trucking companies on both sides of the border. This dependency was due to the closing of the primary transportation routes and border crossing because of the flood. The mid-west is a major trade belt for both countries, and continuity of traffic flow is crucial for the regional economy.

The United States was also dependent on Canada. Following a severe ice storm in the beginning of April, two weeks before Grand Forks was forced to evacuate, more than 300,000 people in North Dakota and Minnesota were left without power. Not only were Americans left out in the cold, loss of power meant that the pumps fighting flood waters around fragile dikes stopped. Within just a few days, approximately 120 hydro workers arrived from Manitoba to repair the downed lines. Calls from the North Dakota Governor and Senator facilitated in expediting necessary paperwork and approval from US immigration and labour boards.

There is, however, an underlying inter-dependence here as well. Although this was not an issue during the 97 flood, Manitoba is has a vested interest in Minnkota Power operations as it uses these lines to sell electricity to more southern states. I'll leave you with that.

Cheryl Moate Presentation

Amy Sebring: Thank you Tricia. Next, Cheryl Moate from the Manitoba Emergency Management Organization (MEMO) joins us from Winnipeg. We have invited Cheryl to come and present some information about PREMAC, the Prairie Regional Emergency Management Advisory Committee, as a possible institutional framework for addressing some of these issues.

Please see the link for the bi-lateral agreement, Canada/United States Agreement on Emergency Planning: http://www.epc-pcc.gc.ca/epc/canada_us.html .

Amy Sebring: Welcome Cheryl. We are very happy to have you with us.

Cheryl Moate: Thank you for inviting us here today to participate in this forum. Harold Clayton and I will present information on PREMAC and look forward to answering any questions you may have after our presentation.

The purpose for establishing PREMAC is to promote information sharing on emergency management issues of common interest, such as sharing emergency resources cross border training, and networking. This was a Federal initiative involving Emergency Preparedness Canada (EPC) and FEMA, USA. To support this purpose, 4 Committees were established under REMAC.

The first slide will describe these Committees. Amy Slide 1, please.

http://www.emforum.org/redriver/workshop/implement.htm

Cheryl Moate: The second slide will describe the Mission set out by PREMAC. Amy, Slide 2, please.

http://www.emforum.org/redriver/workshop/summary.htm

Cheryl Moate: Meetings are the responsibility of EPC and FEMA to arrange and have been held in Ottawa, Denver, and Bismarck in the last year. Issues under discussion at the PREMAC meetings have included:

a. Forest Fire Center, Canada and US Forest Fire Counsel arrangements --- the sharing of resources.
b. Western States Seismic Council --- information sharing with Western REMAC.
c. Mitigation issues - policy and program sharing.
d. First Nation border communities involved in preparedness, planning and recovery joint exercises with the Northern States.
e. Existing Can/US Agreements with emergency/response elements --- review of existing database, and mandate of updates.
f. Cross-Border training/response/liaison --- exchange of lists and follow up on development of liaison exchange working group.
g. Environmental issues --- Cross-border plan for environmental incidents.
h. International Joint Commission --- implementation of recommendations from the Task Force regarding cross border emergency preparations, arrangements, liaison and development.

The 3rd slide indicates existing agreements and plans. Amy, Slide 3, please.

http://www.emforum.org/redriver/workshop/agreemnt.htm

Cheryl Moate:

Current projects include the following initiatives. First, initiating a regular liaison between the Manitoba Emergency Management Organization (MEMO) and the North Dakota Division of Emergency Management to establish a framework upon which to follow through with the recommendations of the International Joint Commission (IJC). IJC Task force members are appointed by respective governments to review mitigation efforts, resource requirements and information sharing regarding the flooding of the Red River Basin.

Second, arranging networking meetings between MEMO and the North Dakota Division of Emergency Management to initiate discussions regarding emergency planning agreements pertaining to the sharing of resources during cross border emergencies...

Third, a cross border exercise is in the works dealing with environmental incidents, designed to test the processes that would be utilized to activate federal/state government resources in a coordinated and effective manner. Environment Canada has the lead role.

A continued exchange of information with regards to Y2K issues is ongoing through the Manitoba Y2K project management office.

Goals of PREMAC involve the development of an Emergency Management Network, a formalized forum between the Federal/Provincial/State governments to discuss partnership, define present and future needs of emergency management, develop potential partnerships, and formalize an information sharing network.

Further information can be obtained from the Federal Emergency Management Agency, Region VIII, Denver Federal Center, Building 710, Box 25267, Denver Colorado 80225-0267, (303)235-4845 or (303)235-4901. Thank you for allowing our participation.

Amy Sebring: Thank you for that introduction Cheryl. We will now take questions/comments pertaining to PREMAC. Harold Clayton, Executive Coordinator for MEMO is with us to assist in responding to questions. Welcome Harold.

Harold Clayton: Thank you.

Question:
Tricia Wachtendorf: Can you talk a little bit about the First Nations initiatives in terms of cross-border emergency issues, training, and planning? It sounds very interesting.

Harold Clayton: Relationships with the First Nations across the border are not that established but would be interested in pursuing them

Amy Sebring: I take it this is an area of need you have identified to work on.

Cam King: Were there any reserves flooded? We need to point out that First Nations are a Federal Responsibility delegated to MANFF but we do work closely with the Province and the Feds.

Question:
Amy Sebring: Do you have a date yet on the exercise you mentioned? This is a hazardous materials scenario planned? Cheryl mentioned an upcoming exercise.

Harold Clayton: Amy, the Buffalo Point one or the Alberta exercise of yesterday?

Cheryl Moate: That refers to the one yesterday in Montana involving Alberta.

Question:
Amy Sebring: Oh, I see. Have you had any feedback on how it went?

Cheryl Moate: No but we will receive feedback from PREMAC in the near future. We would be pleased to share the information with you on receiving.

Question:
Avagene Moore: Is training also provided to local governments and responders as a cross-border attempt at better coordination and communication?

Cheryl Moate: Training continues to be localized with governments rather than cross border at this time.

Question:
Tricia Wachtendorf: During the two years since the '97 flood, has PREMAC identified any major issues that it feels needs to be addressed in terms of cross-border interaction during a disaster?

Cheryl Moate: These issues have been identified in the intro and continue to be addressed by PREMAC and as recommended by the IJC. Specifically, ongoing meetings, increased liaison, pursue US/Canada agreement with emergency planning and management, etc.

Question:
Amy Sebring: Is there a date for the next PREMAC meeting? Does it meet on a regular basis?

Cheryl Moate: PREMAC meets quarterly with the last meeting in Bismark in May 1999 and the next scheduled for the fall. No date has been set as yet.

Amy Sebring: I might add, since there does not seem to be a PREMAC web site, we would be happy to post and/or circulate any proceedings available.

Our thanks to Tricia, Cheryl, and Harold for giving their time to share this information today, and thanks to our members for joining us. A transcript will be posted later, and we will notify you via mailing list when it is available. Also when Tricia's paper is posted.

We will officially close the session, but you are invited to remain a few minutes longer for some off-the-record, open discussion.

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Cross-Border Issues in Disaster Response

Agenda

12:00 - 12:05 Introduction - Amy Sebring

12:05 - 12:25 Study Findings - Tricia Wachtendorf

12:25 - 12:35 Q & A

12:35 - 12:50 PREMAC - Cheryl Moate

12:50 - 1:00 Q & A

1:00 Wrap Up/Open Discussion

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A River Runs Through It
Cross-Border Interaction During The 1997 Red River Flood

Tricia Wachtendorf

Abstract

Research on intergovernmental organization traditionally concentrates on interrelations between different levels of government. Disaster research literature is consistent in this approach to the study of intergovernmental organization, and generally explores relationships between federal, state, and local levels of government during an emergency. Effective disaster management often involves the coordination of multi-agency, intergovernmental response, the complexity of which escalates when two autonomous systems of emergency management must work together. Systems of emergency response typically organize according to political jurisdiction, while the impact of a major disaster rarely respects political boundaries. Despite the prevalence of transnational disasters, there is a lack of systematic research that studies how governmental systems interact and coordinate during cross-border emergency response.

Focusing on the 1997 Red River Flood in Canada and the United States, this study examines structural aspects of transnational organization which arise during the warning and response phases of an international cross-border disaster. Findings are based on interviews with sixty two government officials and non-governmental organization representatives from both sides of the international border, as well as an analysis of government reports and cross-border agreements. A grounded theory framework allowed for: 1) a description of the interaction that took place during
event; and 2) a comparison of the literature findings on intergovernmental coordination during a single disaster with my findings on intergovernmental coordination during a transnational disaster. This research includes the degree of informational and response implementation dependency; whether or not the countries utilize formal and informal processes in their decision making and communications; the extent to which standardization inconsistencies affect the disaster response; and whether cross-border interaction occurs primarily between centralized emergency organizations or decentralized agencies involved in flood-fighting efforts.

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Major Interaction Categories

Dependency

Formalization

Standarization

Centralization

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PREMAC Implementation

PREMAC is one of 4 Committees established under REMAC

1. **Eastern REMAC** - covering east coast Canada and USA
2. **Central REMAC** - covering Quebec and Ontario, Canada and NY, Pennsylvania, Ohio, Michigan, Wisconsin, and Minnesota
3. **Prairie REMAC** - covering FEMA Region 8, Manitoba, Saskatchewan, and Alberta, Canada, North Dakota, South Dakota, Colorado, and Montana
4. **Western REMAC** - covering British Columbia and Yukon, Canada and FEMA Region X, Washington, Idaho, Oregon and Alaska.

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PREMAC Summary

MISSION

The mission of the Prairie Regional Emergency Management Advisory Committee (PREMAC) is to promote emergency management coordination and preparedness in the region in support of the mandate of the Canada/United States consultative group. This is accomplished by:

- Providing a forum to exchange advice and information, and to refer issues on emergency preparedness and response matters;
- Encouraging and supporting the preparation, the implementation and the exercise of emergency plans within the region;
- Assisting when appropriate with the organization of the Canada/United States Consultative group meeting.

MEMBERSHIP

For United States: Federal Emergency Management Agency, Region VIII.
States: North Dakota, South Dakota, Colorado, and Montana.

For Canada: Emergency Preparedness Canada, Alberta, Saskatchewan and Manitoba regions Provincial Emergency Management/Planning Organizations.
Provinces: Alberta, Manitoba, Saskatchewan.

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Existing Agreements and Plans

Canada/Federal

- Canada/US Joint Inland Pollution Contingency Plan
- Canada/US Agreement on Emergency Planning
- CCME MOU for Environmental Emergencies

Provincial - Alberta

- Upstream Petroleum Industry Incident - Emergency Response Support Plan
- Dangerous Goods Incident Support Plan
- Canada/Alberta Administrative Agreement for the Control of Deposits of Deleterious Substances under the Fisheries Act.

US - Federal

- 29 CFR 1910 120
- Federal Response Plan

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Standardization

- Prediction
- Information
- Dissemination
- Measurement Units
- Infrastructure
- Lifeline Services

- Language
- Laws and Regulations
- Wages and Salaries
- Responsibility
- Organizational Structure