

Public Participation in the Emergency Response Phase of Flooding: A Case Study of the Red River Basin

by

Jacqueline Wachira

Natural Resource Institute

University of Manitoba

Winnipeg, Manitoba

Outline

- Introduction
- Emergency Response
- Methods
- Results
- Conclusions

Introduction

- In Manitoba, flooding is associated particularly with the Red River.
- The Red River Flood of 1997 is Canada's highest recorded flood of the 20th century in the Red River Basin. It was caused by high topsoil moisture and a blizzard in April of that year.

Introduction Cont...

- An estimated 1,840 km² of land was flooded in Manitoba.
- Throughout the Red River Basin, homes businesses, and farmsteads were damaged and destroyed.
- Over 100,000 people were evacuated (28,000 of them in Manitoba).

Introduction Cont...

- Four phases of emergency management: **mitigation, preparedness, response, and recovery.**
- **Mitigation:** involves the evaluation of alternative mitigation measures for possible implementation in order to reduce flood damages in a region.

Introduction Cont...

- **Preparedness:** involves the preparation of plans or procedures to save lives and minimize damage when an emergency occurs.
 - It includes the establishment of flood forecasting, monitoring and warning systems, evacuation procedures, and public information services.

Introduction Cont...

- **Response** : defined as the actions taken to save lives and prevent further damage in an emergency situation.
 - It includes activities such as evacuation, search and rescue, and the provision of basic necessities to flood victims.
- **Recovery** : involves actions taken to return a community to normal following a disaster.

Emergency Flood Response

- In Canada and the U.S, when flooding occurs, the initial responsibility for emergency response lies with the individual and the local authorities.
- However, if local authorities cannot manage the emergency, the provincial/state government is called in to assist.
- Similarly, the federal government makes its resources available when a province/state cannot effectively respond to an emergency. ⁸

Emergency Response Cont...

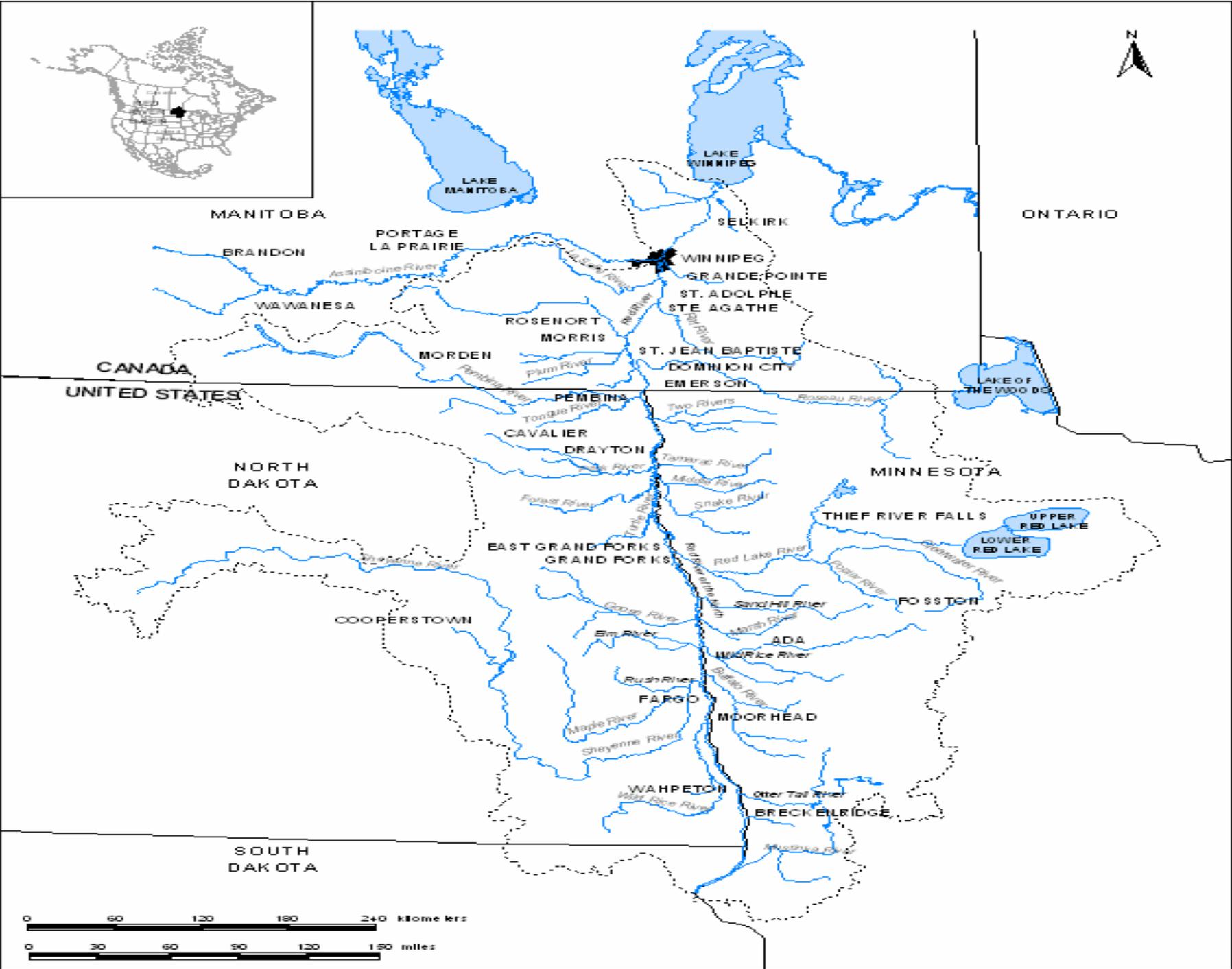
- Emergency flood response is a controversial phase in flood management largely because there is virtually no public input into important decisions such as evacuation orders.
- Little attention has been paid to the potential for involving the public more in decision-making in this phase of flood management. In fact, flood managers are generally not at all receptive to the idea.

Emergency Response Cont...

- The purpose of the study was to examine the role that the public plays in emergency flood response in order to identify how public involvement might be better incorporated into this phase of flood management.

Methods

- A case study approach of the Red River flood of 1997 was taken involving two communities from Canada and the United States in the Red River basin.
- One community was the village of **Rosenort** in Manitoba, and the other was the city of **Drayton** in North Dakota.



Methods Cont...

- Semi-structured interviews with community members, local groups, government officials and NGOs from each jurisdiction (a total number of 41 interviews were conducted).
- Documents review of any reports about the Red River flood of 1997.

Results

- The study revealed that community members in both towns made important decisions regarding how to protect their individual property as well as the community as a whole.

Results Cont...

- The study revealed that the public in both communities viewed themselves as first responders in a flood emergency.
- As such, during the emergency response phase of the 1997 flood, they carried out a host of activities such as sandbagging moving furniture to higher ground, and watching pumps in order to protect their property from rising flood waters.

Results Cont...

- These activities were carried out as
 - Individuals
 - Neighbourhood committees
 - Local groups i.e. church groups, community service organizations
- Community activities were largely self-organized without being controlled by external agencies.

Results Cont...

- Government respondents agreed that community members were first responders.
- As such, government agencies played a supporting role (for the most part) by providing resources such as sandbags, dike building equipment, boats and flood updates in order to fight the flood.

Results Cont...

- NGO agencies (although not highly involved in Rosenort and Drayton) and thousands of volunteers from different towns and cities were also involved in the emergency response phase of the 1997 flood.
- NGOs provided essential relief support such as food and clothing, while volunteers provided labour.

Conclusions

- The roles that community members, government and NGO agencies, and volunteers played during the emergency response phase of the 1997 flood should be enhanced.
- One way of doing this is by creating more opportunities for the public to be involved during emergency flood response.

Conclusions Cont...

- For example, in 1997 the public did not have the opportunity to be involved in the mandatory evacuation decision.
- This was a key decision that impacted the ability of locals to carry out their response activities yet was made without public input.
- The result was a lot of confusion and dissatisfaction.

Conclusions Cont...

- Of course issues of evacuation that affect public safety cannot be left in the hands of individuals. However, the public still needs to be somehow involved.
- One way of doing this would be to hold a public town meeting (or other similar participatory forums) to discuss elements of the evacuation plan and any other issues of concern.

Conclusions Cont...

- In some cases however, there may not be enough time during a flood emergency to hold town meetings or other similar public participation forums.
- This is where the importance of emergency planning prior to a flood event becomes clear.
- Emergency planning promotes preparedness and reduces flood vulnerability.

Conclusions Cont...

- It provides an umbrella under which experts, government and the public could jointly discuss contentious issues such as evacuation.
- This would help minimize confusion and dissatisfaction during a flood emergency.
- **Challenge:** How to get the public interested in emergency planning when there is no emergency.

Conclusions Cont...

- The development of emergency preparedness plans has had slow progress in the Red River Basin since the 1997 flood.
- The implication is that if there was a flood of the 1997 magnitude or higher, the same contentious issues of 1997 would probably erupt.