

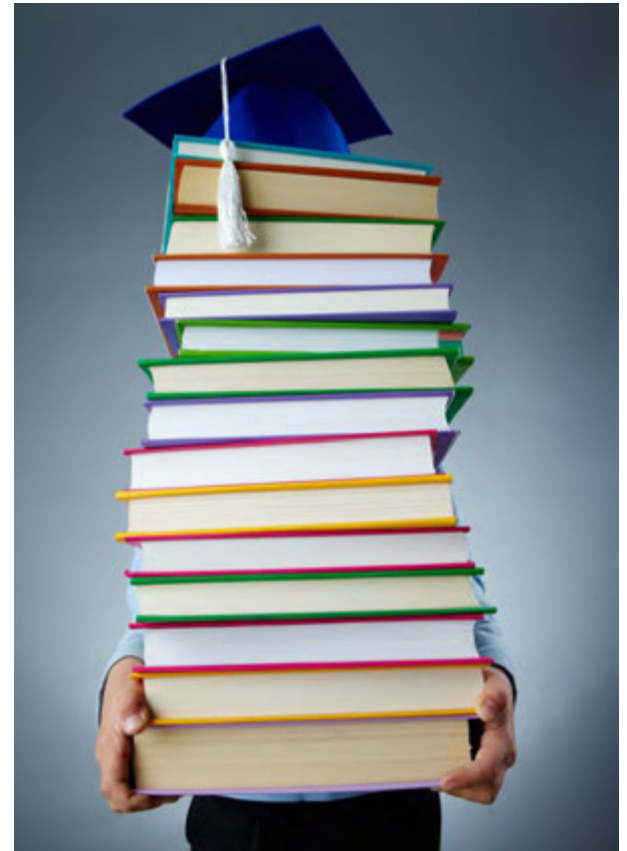
**Flooding discourse:
Perceptions and practices of the
2013 flood management in High River, AB**

CWRA Conference
Mar. 21-23, 2014
Calgary, Alberta

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OUTLINE

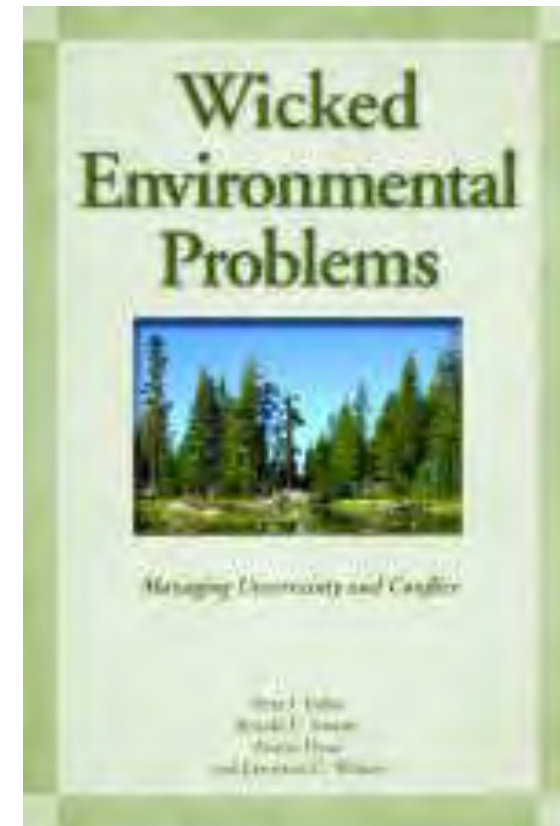
- 1. Introduction**
- 2. Research gap**
- 3. Objectives**
- 4. Methods**
- 5. Preliminary Findings**
- 6. Next Steps**
- 7. Questions/Suggestions**



INTRODUCTION

Flooding is a 'wicked' problem

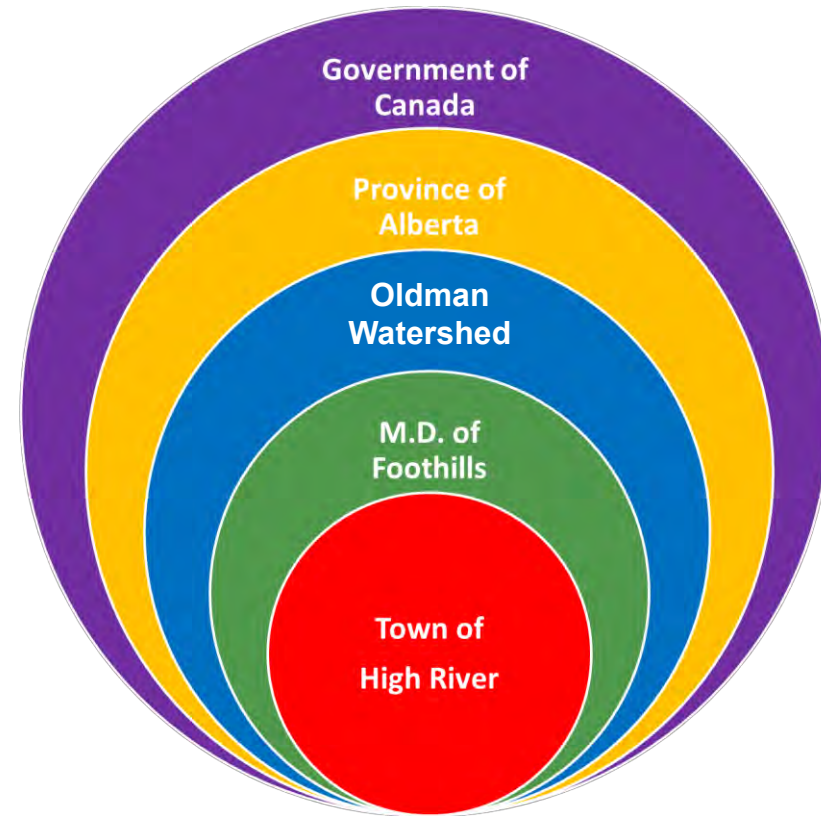
- **Complex socio-environmental context**
- **Competing social interests, values & demands**
- **Privilege different 'scientific' facts & evidence → backfire**
- **Fragmentation of knowledge & information**



INTRODUCTION

Effective flood management requires:

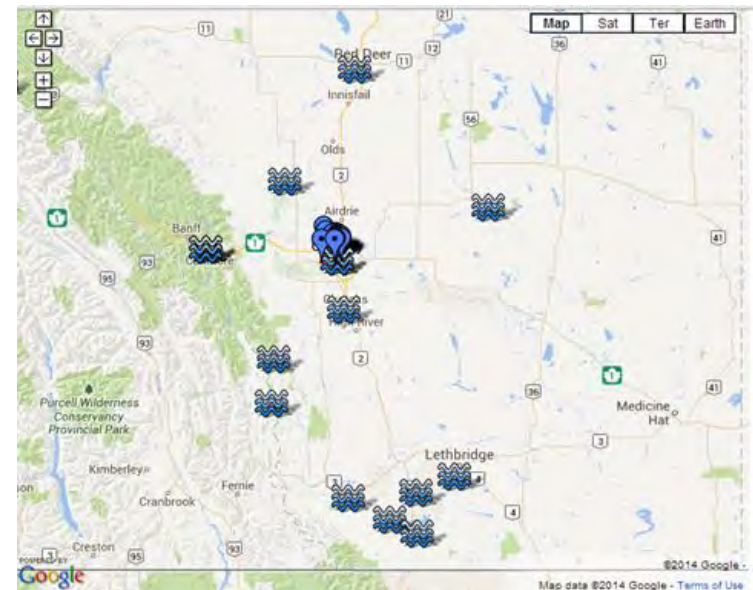
- 1. Coordination of policies & programs**
- 2. Public engagement & dialogue**
 - multiple perspectives
 - create a democratic space for new, more productive patterns



GAP

Why study High River, Alberta?

1. Alberta's 2013 floods is one of the worst and most expensive disasters
2. Scholarly literature on flooding focuses on Manitoba and biophysical rather than socio-political factors



GAP

3. From a socio-political perspective, Alberta has some unique characteristics:
- i. World's third largest crude oil reserves
 - ii. Only 42% of Albertans believe greenhouse gases cause climate change
 - iii. Pro-industry political climate



GAP

- 4. Provincial land use and watershed management plans are currently being developed**
- 5. Town of High River has a history of chronic flooding:**
1894, 1899, 1902, 1908, 1912, 1923, 1929, 1932, 1942, 1995, 2005, 2013



OBJECTIVES

How are socio-political factors shaping perceptions of, and responses to, flooding?

1. How did decision-makers at the municipal and regional level perceive the floods and how do these perceptions align or contrast with practices that impact flood management?;
2. What kinds of practices were implemented by municipalities to demonstrate accountability to citizens and how effective was the engagement of citizens?; and
3. How did the media frame the 2013 Alberta floods and to what extent did framing in the mass media reinforce dominant ideologies and exclude alternative views?

METHODS

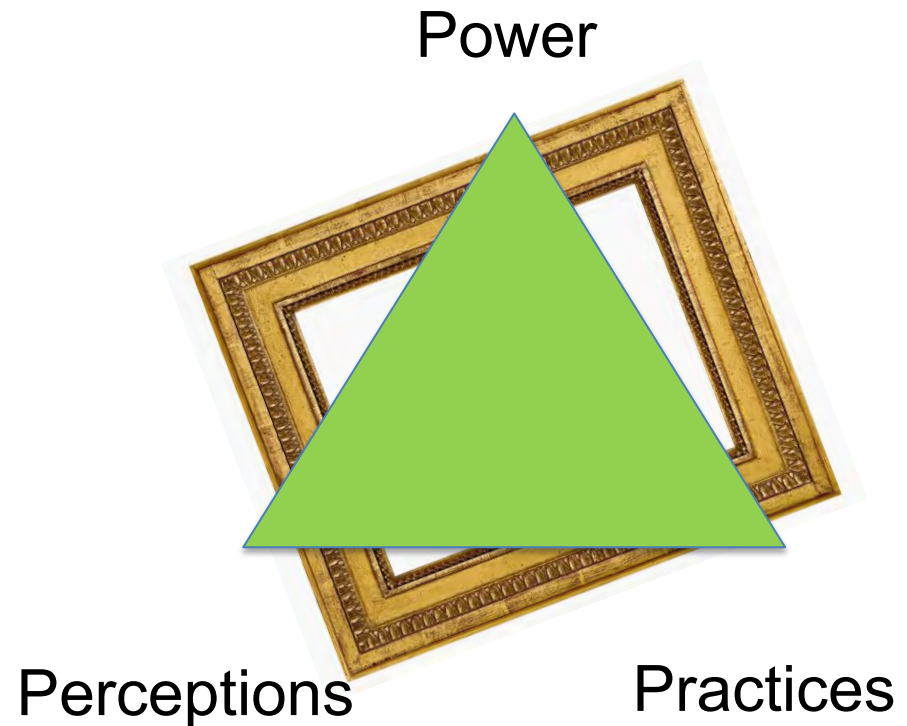
Critical discourse analysis

Framing effect theory

- Emphasis, exclusion → problem definition & remedy promotion

Social practice theory

- Everyday practices, interplay between individuals and structures (institutions, roles)



METHODS

Multi-scale and mixed-methods:

- Examine and compare themes
- Discern recurrent patterns
 - inundate or „flood“ discourse and „mobilize bias“

Sources:

1. Media analysis
2. Review reports and policy documents
3. Conduct interviews



PRELIMINARY FINDINGS – ‘SOLUTIONS’

Dams?

“The dry dam was selected as one of the first flood-mitigation projects to proceed with because it is expected to have „the least impact“.”

Nov. 21, 2013 Metro



Healthy ecosystems?

“Much of the flood mitigation discussion has been about engineering solutions [even though] floods damage floodplain infrastructure - including dams and berms. The importance of intact healthy landscapes not only for flood mitigation but also for drought amelioration gets lip service in the public dialogue, but little tangible policy action in the Province's land use planning.” *Jul/Aug 2013 Alberta Views*

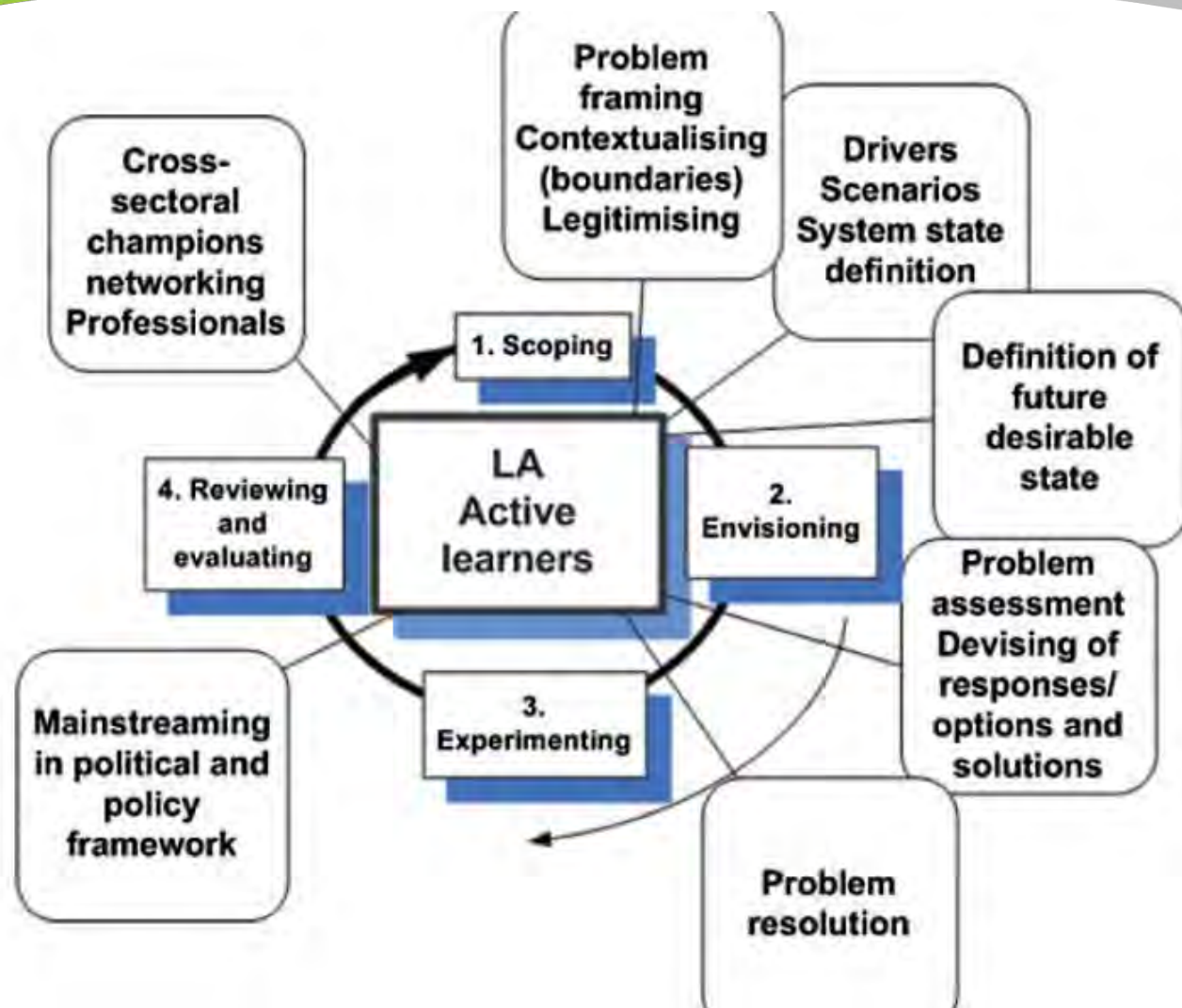
PRELIMINARY FINDINGS – OTHER JURISDICTIONS

- **Learning and Action Alliances (LAA)**
→ UK, Netherlands, Norway, Germany
- **Social & active learning**
- **Change culture of policy & decision-making**
- **Systems thinking**



Fig. 1 The centrality of LAs to the wicked problem-solving process

(Ashley & Blanksby, 2005 in Ashley et al., 2012, p. 16)



PRELIMINARY FINDINGS – OTHER JURISDICTIONS

Phronetic (planning & social science) research

Questions:

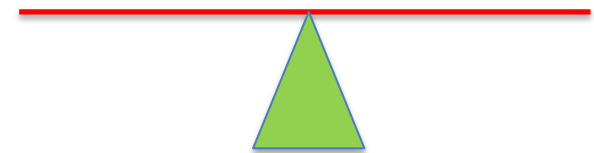
1. Where are we going?
2. Who gains and who loses, and by which mechanisms of power?
3. Is this development desirable?
4. What, if anything, should we do about it?

Results: Possibilities, problems, risks



Scientific &
Technical

Values



PRELIMINARY FINDINGS – OTHER JURISDICTIONS

- **Question traditional flood mitigation measures**
 - Canalizing & dredging rivers → increase flow rates to downstream
- **Traditional mega infrastructure solutions vs. multi-functional and softer engineered solutions**
 - Rewilding rivers → Redesigning of curves, connecting rivers to uninhabited land, creating catchments
 - Rebuilding of soils
 - Restoration of riparian areas and floodplains (e.g. agroforestry)

Effective flood management

1. Coordination of policies & programs

“Lessons that can be learned from the floods are that Canada needs to use higher resolution forecast models to improve the forecasted precipitation, use a real-time hydrological model and couple radar estimates with rainfall. ...would require greater co-ordination between the federal and provincial governments... The investment in infrastructure in Canada is woefully lacking.” *Feb. 15, 2014 Calgary Herald*

Effective flood management

2. Public engagement & dialogue

- multiple perspectives
- create a democratic space for new, more productive patterns

“The Government of Alberta has committed to taking a watershed wide approach that considers all options. Three proposed hard infrastructure options are currently being assessed for feasibility and have received extensive news coverage.

We want to add to the conversation by talking about natural flood mitigation options.” *Jan. 24, 2014 Alberta WaterPortal*

NEXT STEPS

1. **Literature reviews** (Summer 2014)
2. **Preliminary documentary and media analysis**
(Summer & Fall 2014)
3. **Complete & defend
research proposal**
(Fall 2014)
4. **Conduct interviews**
(Fall/Winter 2014)



Thank you!

Questions? Suggestions?

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