



UNIVERSITY OF LEEDS

# Exploring the transboundary risks of wildfire: a case study from rural British Columbia, Canada

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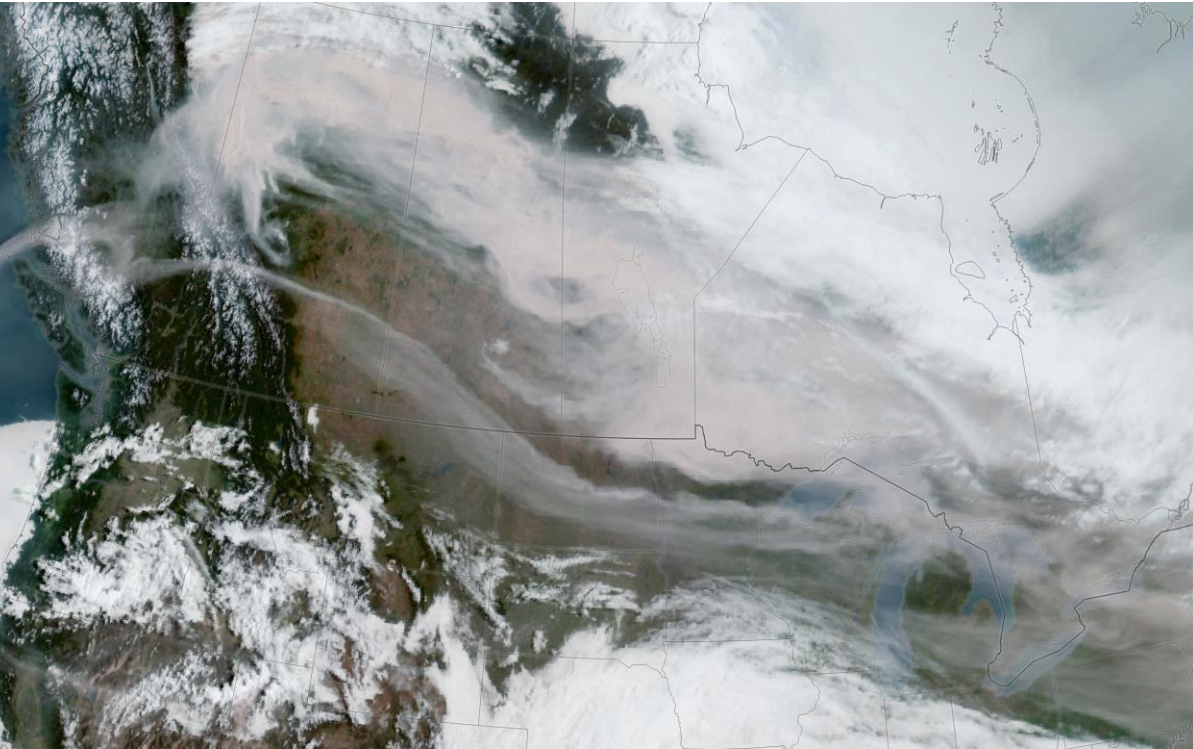


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## Introduction

Transboundary risks: what are they?



Source: <https://earthobservatory.nasa.gov/images/151346/smoke-fills-north-american-skies>

## Transboundary risks: what are they?

- Risks that cross borders, jurisdictions... Also applies to measures taken to adapt to risks
- Transmitted through shared natural resources and ecosystems, trade links, finance and human mobility
- Examples: disruption to transport corridors, power outages, air pollution...
- Remains a blind spot in policy. Important differences across actors and institutions

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## Valemount, British Columbia

Research project

Methodology & methods

Valemount, British Columbia



# Research project

## Rationale:

Increasing wildfire severity and frequency. More evacuations, bigger areas burned...

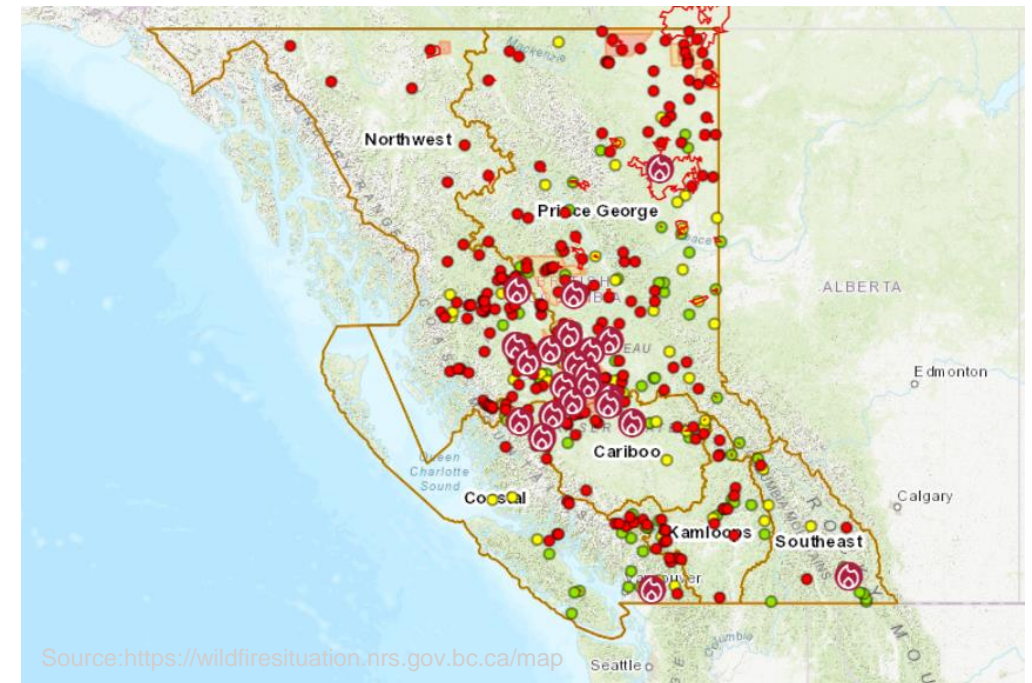
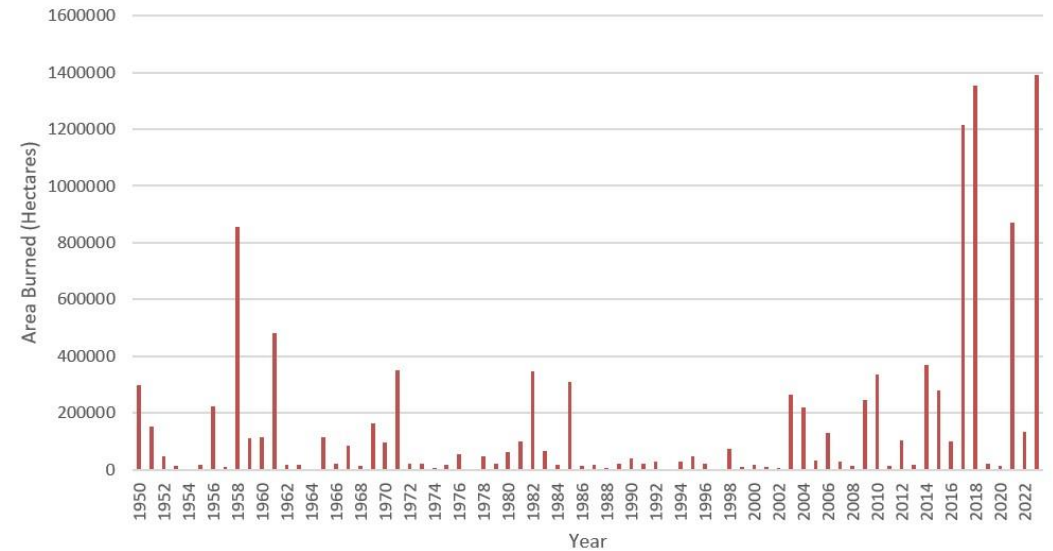
## Aim:

Understand how people in rural British Columbia are experiencing and responding to increasing wildfire activity

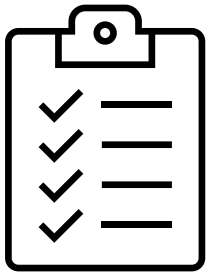
## Objectives: Examine and document...

- Risk perceptions
- Wildfire impacts
- Responses and adaptations

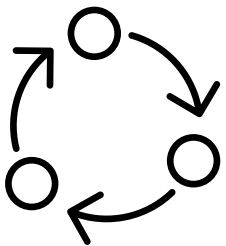
BC Area Burned 1950-2023



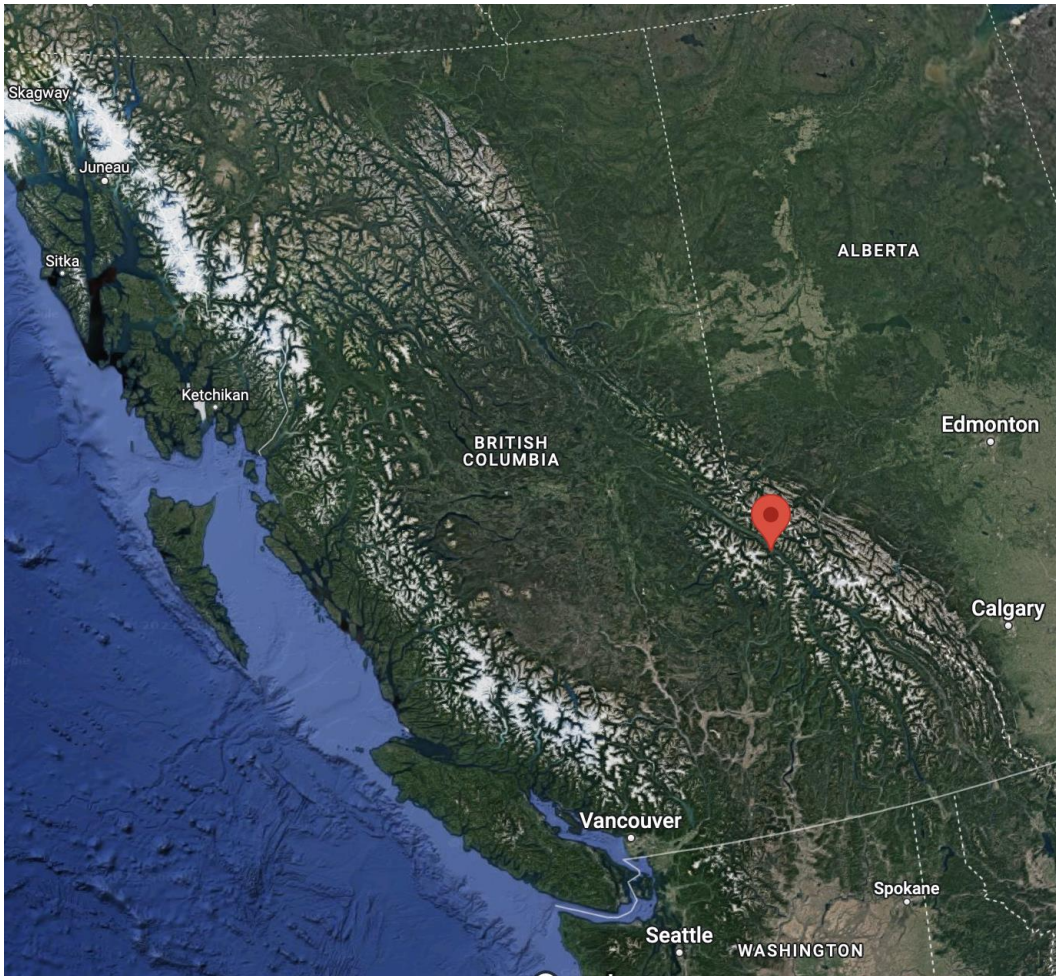
# Methodology & methods



- Semi-structured interviews to collect qualitative data on community risk and resilience to wildfires in rural BC
- Elected officials, public safety or emergency services coordinators, foresters and land managers, business owners, and private-sector fire practitioners
- Fieldwork between September – October 2022. 16 face-to-face interviews. 4 online interviews.



- **Exposure**: presence of human beings, livelihoods, assets, and environmental services and resources
- **Vulnerability**: pre-existing characteristics of a community that create sensitivity to harm
- **Resilience**: capacity or ability of communities to persist, recover, adapt and/or transform in the face of hazards



## Valemount, British Columbia

- Small, rural mountain community of approx. 1,000 permanent residents (3% First Nations, 9% Métis) in the western edge of the Canadian Rockies
- Economy: accommodation and food services, retail trade, construction, and health care and social assistance
- Mix of private and public land (i.e., Crown Land)
- Medium to high wildfire risk. Never been evacuated







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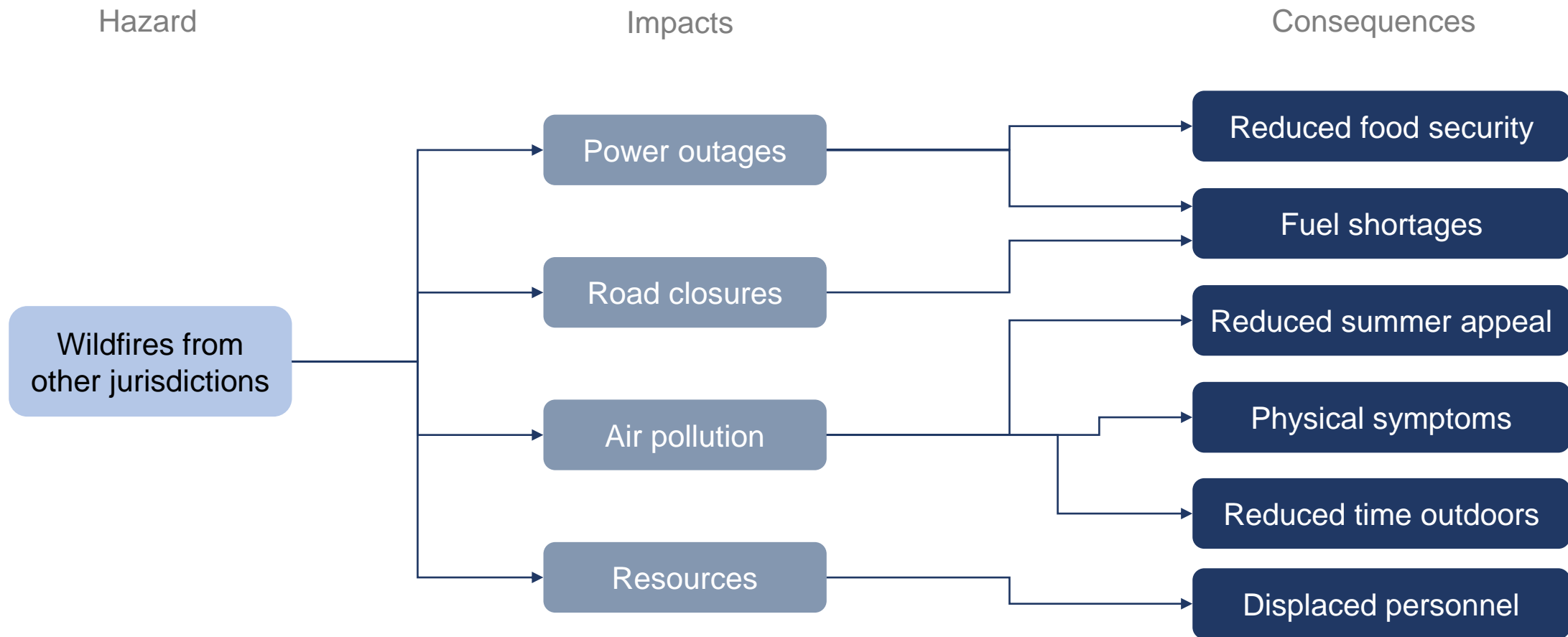
## Transboundary wildfire risks in Valemount

Impacts

Drivers of exposure and vulnerability

Resilience

# Impacts



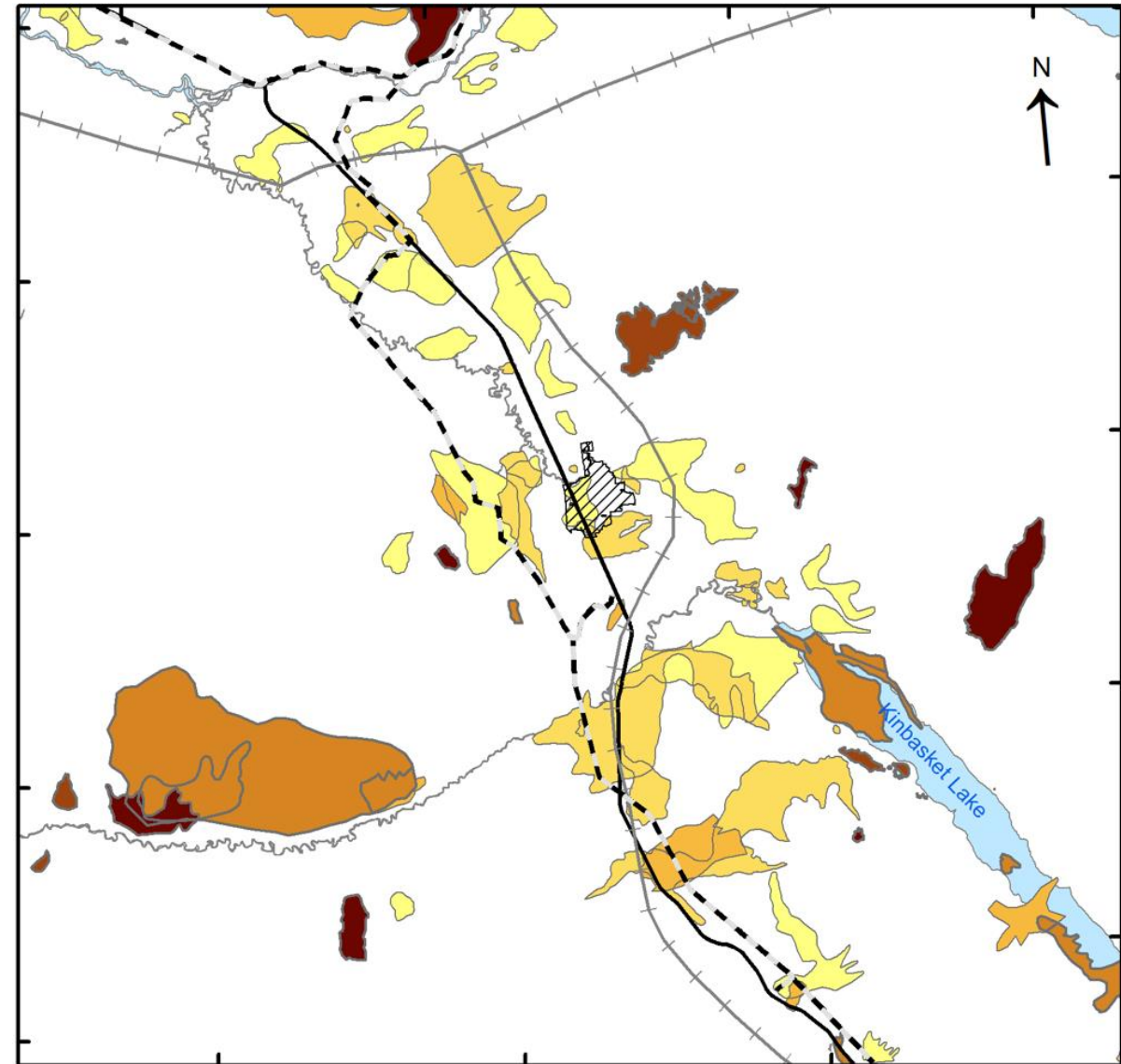
## Drivers of exposure and vulnerability

### Increases exposure-vulnerability:

- Egress of the community: one road in and out (Hwy 16)
- End of 350 km power transmission line
- Seasonality & perceptions. People forgetting about wildfires during winter
- Lack of financial resources & landownership

### Reduces exposure-vulnerability

- Local airstrip & access to Kinbasket Lake



# Resilience



Purchase and use of generators and presence of Independent Power Producers (IPPs) to continue providing services to the community, including water and sewage treatment



Community relationships. Improves people's ability to cope with and reduce the impacts of wildfires (loan generators)



Living there. Previous experience with wildfires increased the adoption of measures. Local knowledge very important.



Good interagency communication. Relevant to wildfire management and emergency response





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## Conclusions

Transboundary wildfire risk have considerable negative impacts on communities

Rural communities and reliance on out-of-community power contribute to increased risk

Essential that stakeholders recognize and aim to mitigate cross-border and cascading wildfire impacts.

Adopt transboundary cooperation and collaboration approaches are key to adapt to transboundary risks

**Thank you for listening**

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