



# QUALITATIVE METHODS IN HEALTH EDRM

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Building for Health Emergency and  
Disaster Risk Management (Health EDRM)  
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# My presentation ...

- Content of 2023 Canadian Wildfires (as case study example)
- Overview of qualitative research methods
- Potential use of qualitative methods in Health EDRM research
- Key messages from Chapter 4.12 Qualitative Research (WHO Guidance on Research Methods for Health EDRM)

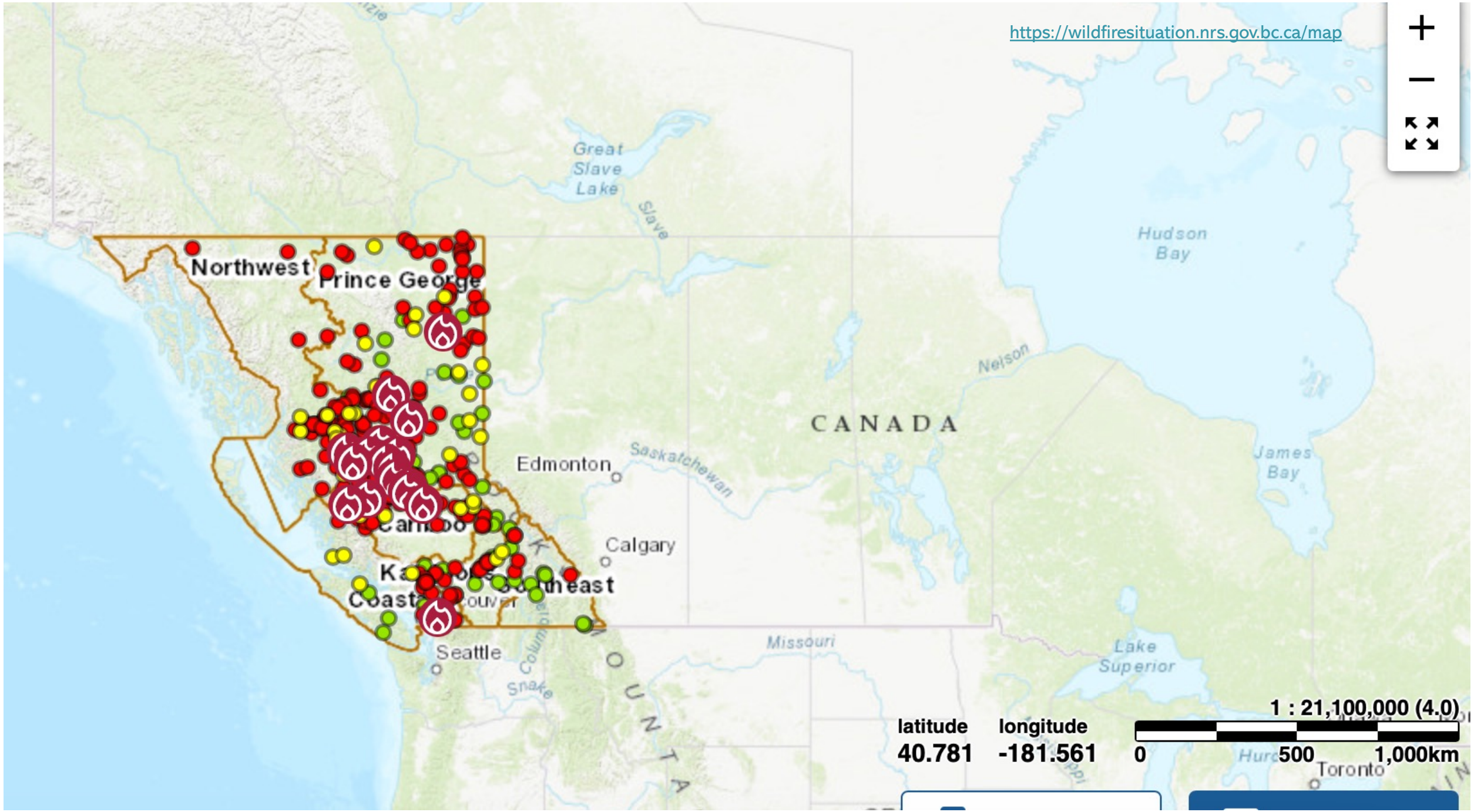


# Canadian Wildfire Season 2023

- Many regions in Canada have experienced severe wildfires this summer – breaking records in the first 2 months of the season
- Firefighters from other countries have come to Canada to provide support and resources
- The Donnie Creek fire in northeastern B.C. is just one of 100's of wildfires in British Columbia this summer.



The Donnie Creek fire in northeastern B.C. is seen during a planned ignition operation on June 3. (B.C. Wildfire Service)



CANADA

1 : 21,100,000 (4.0)

latitude 40.781 longitude -181.561



0 500 1,000km

# Donnie Creek Wildfire, B.C. (2023)



London, UK 1572 km<sup>2</sup>

The Donnie Creek wildfire in northeast B.C. is larger than Prince Edward Island. (CBC Graphics )

# Potential Approaches to Study Wildfires

- We each have dominant paradigms in how we look at a problem, issue or opportunity
- Our paradigms inform the research questions we might ask regarding wildfire – and the types of programs, policies, solutions, approaches we prioritize
- Considering the chart comparing the wildfire with the size of Toronto or Vancouver you might wonder about the number of responders ... the number and distribution of people impacted ... wildlife impacted ... CO<sub>2</sub> emitted, epidemiology of these events and the health impacts .... financial costs, etc. These questions could be answered with quantitative methods.



# Looking at the wildfires through other paradigms ...

- How are firefighters experiencing this wildfire season in comparison to other seasons? What are the experiences of their families?
- How can timely and appropriate support mechanisms best be provided to ensure responders are willing and able to respond during a long, intense wildfire season?
- What was the evacuation experience like for persons with disabilities? What improvements could support PWD in another evacuation?



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# Looking at the wildfires through other paradigms ...

- Who is most at-risk in these communities and how are they impacted?
- How can the short- and long-term health impacts of poor air quality be reduced?
- How can risk be reduced through the contributions of different sectors?
- How have wildfire evacuees navigated the insurance system following property loss?
- How were farmers who had to evacuate without their livestock supported through response and recovery?



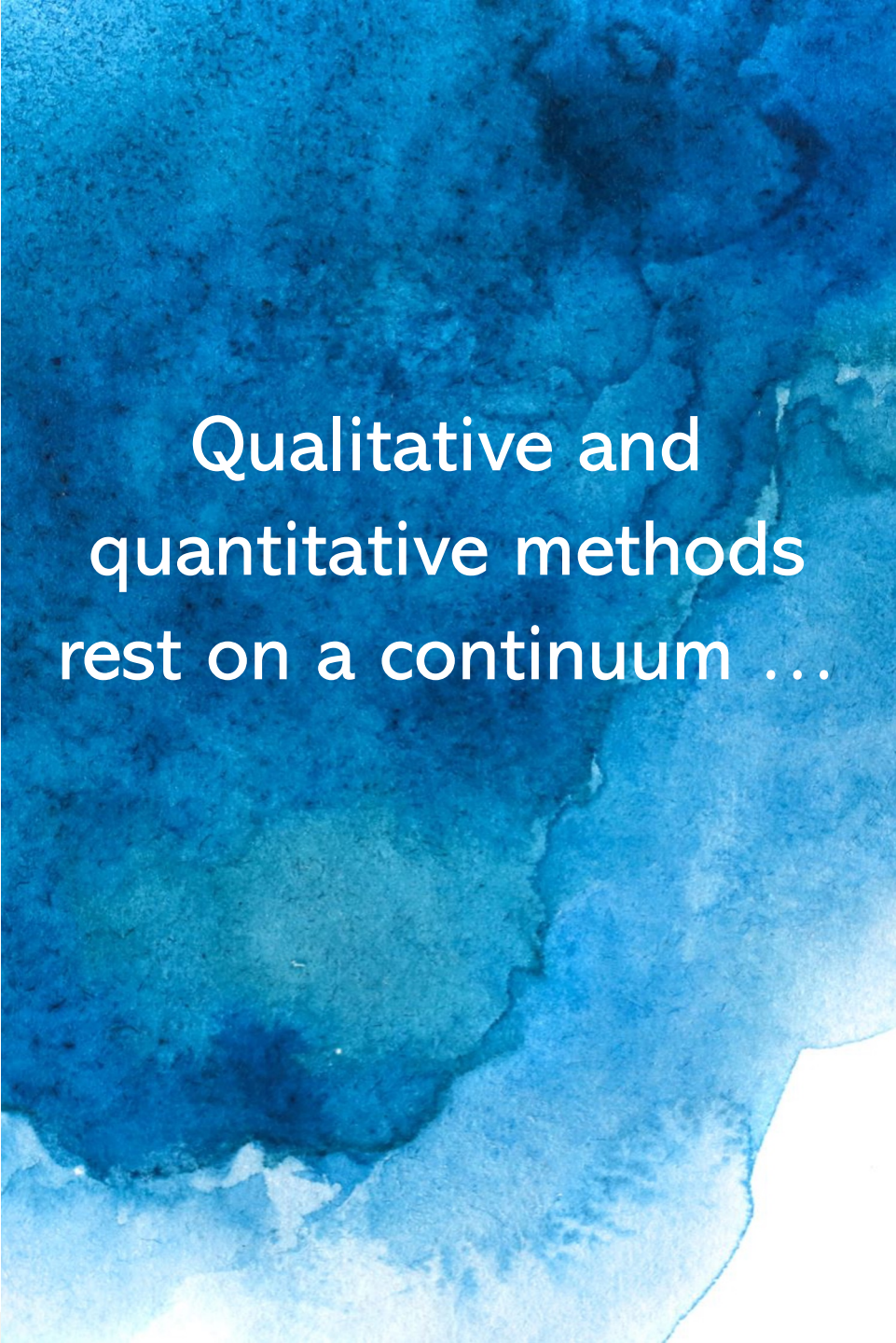
The Donnie Creek fire in northeastern B.C. is seen during a planned ignition operation on June 3. (B.C. Wildfire Service)



# Understanding Complexity in Health EDRM

- Health-related disasters are typically complex and embedded within one or more complex adaptive system
- Qualitative methods can help provide context to understand the complexity (e.g. feedback loops, interconnectivity, non-linearity) of multi-hazard systemic risk
- In the context of wildfires you could use these qualitative methods ...
- **Qualitative interviews with firefighters experiencing burnout could provide depth about how and why responders are accessing supports (or not)**
- **Potential solutions for supporting farmers with livestock could be generated through consultations with communities**
- **Observations at shelters of the timing and manner which people receive information about insurance processes could contribute to understanding what practices facilitate understanding and satisfaction with the processes**
- **Group discussions and documentation of stories with evacuees could provide context for how people in a community self-organized to assist neighbours with livestock during an evacuation**

- They serve different purposes and align with different paradigms, therefore are evaluated using different criteria (e.g. what constitutes an appropriate sample size)
- Qualitative methods are not simply a way to quantify narrative data – qualitative methods are vast and distinct practices with different underlying assumptions and values
- Types of data include, but are not limited to:
  - Text - generated for the study or publicly available (eg. online posts, news media, policies, documents)
  - Images, artifacts, video recordings, artwork
  - Observations
  - Individual or group discussions

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Qualitative and  
quantitative methods  
rest on a continuum ...

|                              | Qualitative Research  | Quantitative Research  |
|------------------------------|---|--|
| <b>Purpose</b>               | Understand and explore behaviour, opinions, experiences from participants' perspectives           | Describe social phenomena;<br>Discover facts                             |
| <b>Design</b>                | Emerging and flexible   | Standard and fixed   |
| <b>Paradigm</b>              | Multiple interpretations of reality exist (subjective)  | Reality is fixed (objective)   |
| <b>Setting</b>               | Naturalistic (contextual)   | Controlled (empirical)   |
| <b>Sample size</b>           | Small   | Large  |
| <b>Data Collection</b>       | Open-ended<br><br>Observation, interviews, focus groups, narratives, document analysis, artifacts | Closed-ended<br><br>Objective measurements<br>Questionnaires and surveys |
| <b>Data analysis</b>         | Inductive<br><br>Themes, text, images   | Deductive<br><br>Numerical comparisons and statistical inferences        |
| <b>Biases</b>                | Acknowledged and assumed to influence findings  | Reduced or eliminated  |
| <b>Standards for Quality</b> | Dependability, Credibility and Authenticity, Auditability, Transferability, Confirmability        | Internal Validity, External Validity, Reliability, Objectivity           |

## Some Differences Between Qualitative and Quantitative Research Methods

(see Pickering et al. 2021 Chapter 4.12)

# Key Messages from Chapter 4.12: Qualitative Research

Christina Pickering  
Suzanne Phibbs  
Christine Kenney  
Tracey O'Sullivan

- Qualitative research has important roles and has filled many research gaps in Health EDRM.
- Methods to enhance rigour and credibility are used to enhance quality.
- Community-led and/or community-based research is based on partnerships and is enabling and transformative
- The emergent design of qualitative research offers flexibility to address complex and differing experiences.

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Canada

Thank you!



uOttawa



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