

An aerial photograph of the Vancouver waterfront, featuring a marina with numerous boats, a bridge, and modern high-rise buildings. The image is overlaid with a semi-transparent teal color. The text 'BC | Climate Resilience Summit 2026' is centered over the image. 'BC' is in yellow, 'Climate Resilience' is in white, and 'Summit 2026' is in yellow.

BC | Climate Resilience Summit 2026

Vancouver, Robson Square | March 2-3

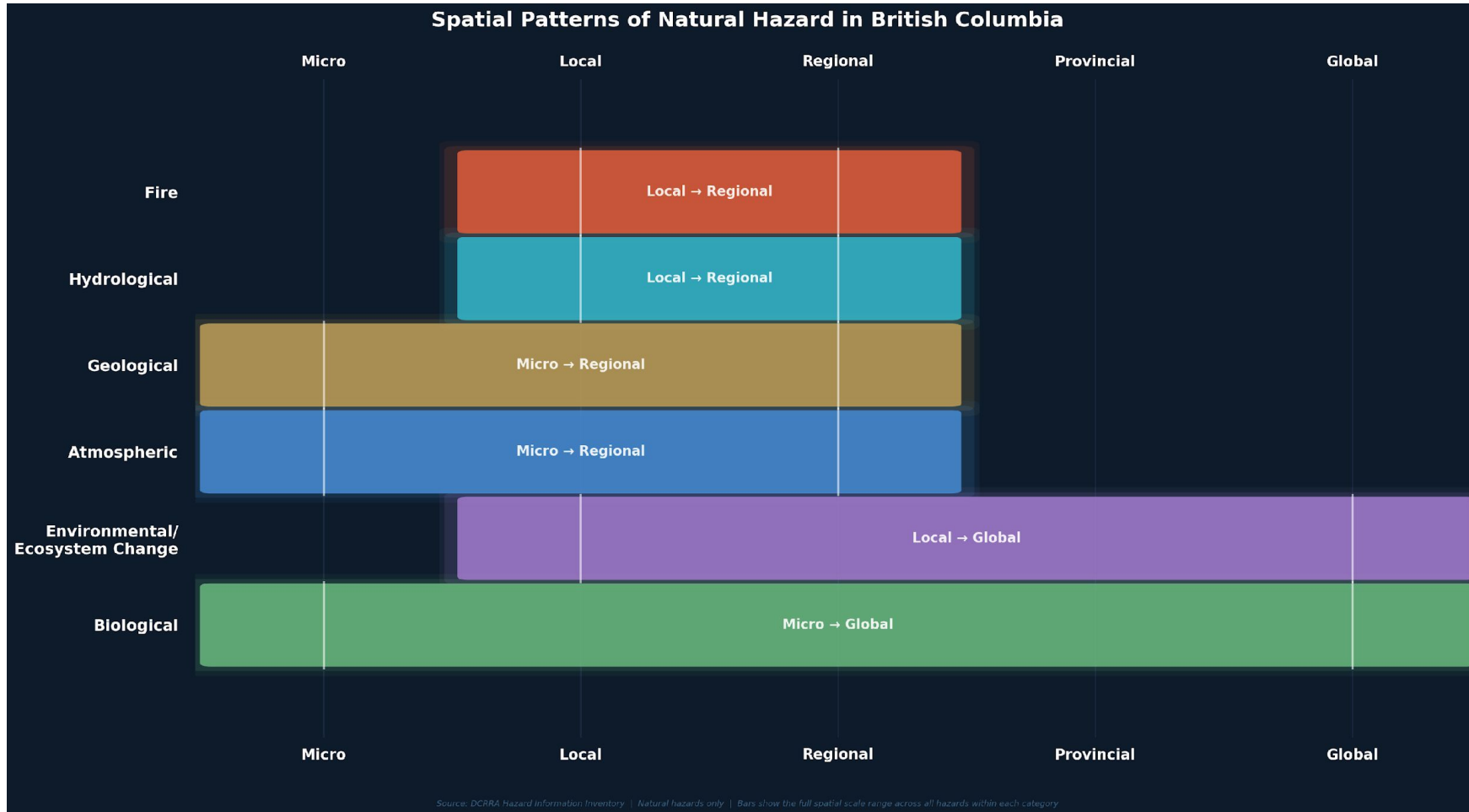
Multiple Scales of Risk Assessment

| | Aspatial | | Highly Spatial | |
|-----------------|---|---|--|---|
| Tool Scale | Provincial | Regional | Local | Site |
| Approach & Data | <p>H High-level hazard identification (quantitative or qualitative)</p> <p>E & V Regional scale vulnerability information (quantitative or qualitative)</p> <p>C High-level empirical loss methods (Probable Maximum Loss) or qualitative matrices</p> | <p>H High-level hazard mapping</p> <p>E & V Neighbourhood-level (census tract) GIS attributed with generic exposure & vulnerability information</p> <p>C Generic or synthetic damage/fragility</p> | <p>H Local-level detailed hazard mapping</p> <p>E & V Parcel-level attributes with exposure (and vulnerability) information</p> <p>C Relevant damage/fragility</p> | <p>H Site-level detailed hazard mapping</p> <p>E & V Specific attribute information</p> <p>C Relevant damage/fragility</p> |
| Uses | <ul style="list-style-type: none"> Provincial-scale planning and prioritization for emergency management and investment Input to re-insurance models Public education | <ul style="list-style-type: none"> Regional-scale planning and prioritization for emergency management and investment Public education | <ul style="list-style-type: none"> Local-scale planning and prioritization for emergency management and planning and investment Risk reduction decision-making Etc. | <ul style="list-style-type: none"> Site specific risk reduction decisions |

Takeaway message: Risk Assessment can be conducted at many scales. Regional is one.

H Hazard **E & V** Exposure & Vulnerability **C** Consequence

Spatial Patterns of Hazard

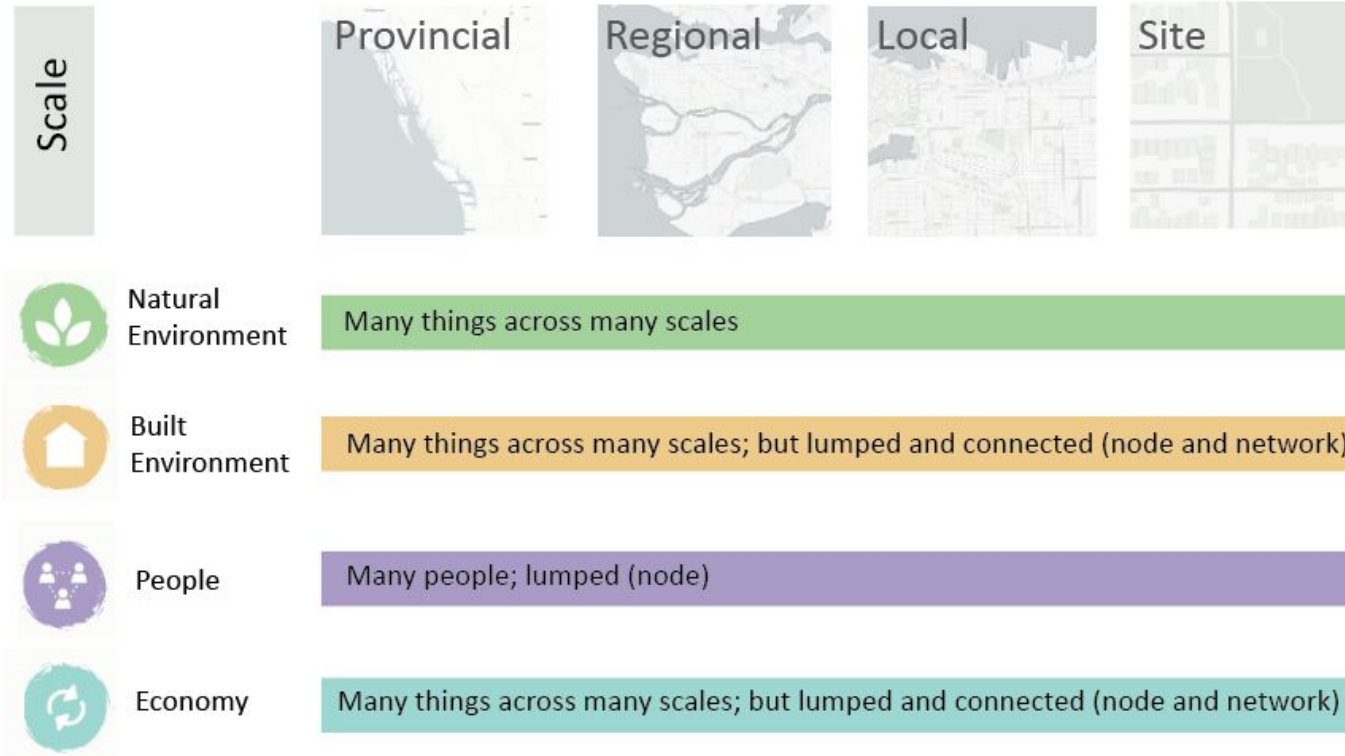


Takeaway message:
Different hazards operate at different scales. Most have a regional relevance.

Spatial Patterns of Exposure & Risk

Aspatial

Highly Spatial



Takeaway message:
Different values (exposure) are relevant at different scales.

Spatial Patterns in Governance for DRR

Who →

↑
What

| Core Competencies/Sector (Agency) | | Government | | | | Other Authorities | | | | Civil Society | | | Private Sector | | | Public | | | |
|-----------------------------------|------------------------|------------------------------|-------------------------|-------|--------------|--------------------|------------|--------------------|--------------|--------------------------|-----|----------------|----------------|----------------------|-----------|--------|--|--|--|
| | | Federal | Provincial | Local | First Nation | Diking Authorities | Dam Owners | Crown Corporations | Water Boards | Professional Association | NGO | Post-Secondary | Asset Owners | Advisors/Consultants | Insurance | | | | |
| Risk Reduction Tools | Plan-ning | Flood Management Plans | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Land Management | Maintain Natural Assets | ■ | ■ | ■ | ■ | | | | | | | | | | | | |
| | Restore Natural Assets | | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | Hazard Control | Dams - Build | | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Dams - Operate and Maintain | | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Dikes - Build | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Dikes - Operate and Maintain | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Channel Maintenance | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | Exposure | Acknowledge/Disclose | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Avoid | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Retreat | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Redistribute | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | Vulnerability | People | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Culture | | | | | | | | | | | | | | | | | |
| | | Environment | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Critical Infrastructure | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Structures | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| | | Economy | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |

Takeaway message: Governance (Authority, Funding, Etc.) is very fragmented and lies with all scales of government (and others)



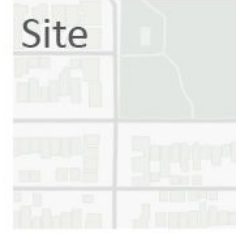
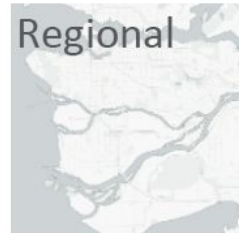
Investigations in Support of Flood Strategy Development in British Columbia. Issue A: Flood Risk Governance. Ebbwater Consulting Inc et al. May 2021.

Spatial Patterns in Risk Reduction

Aspatial

Highly Spatial

Scale



Land Use
(Exposure)

Policy goalposts

Policy actions

Actions



Building Controls
(Vulnerability)

Policy goalposts

Policy actions

Actions



Infrastructure
(Hazard)

Policy goalposts & priorities

Design and implementation



Residual Financial
Risk Management

Re-insurance

Insurance



Emergency
Management

Policy goalposts & priorities

Response plans and action



Public Education

General preparedness

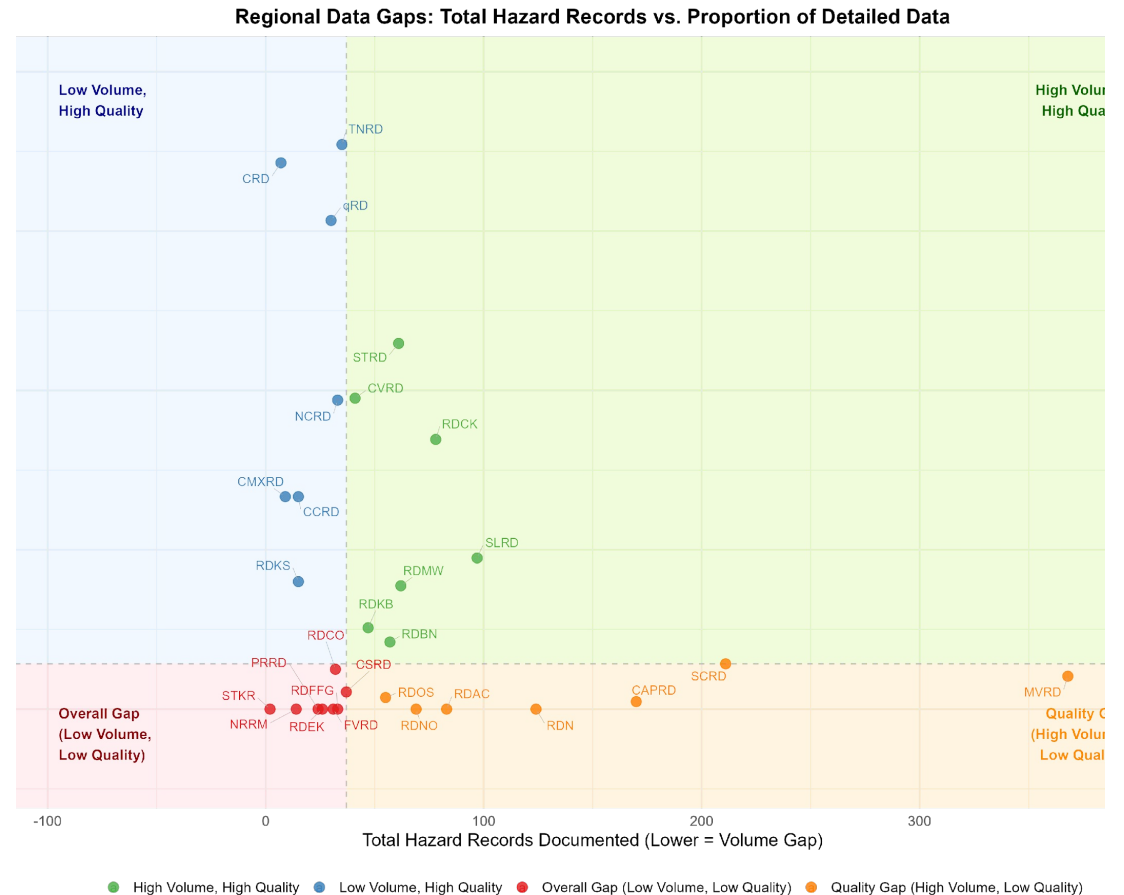
Specific preparations

Takeaway message:
Actionable risk reduction
occurs at different scales.

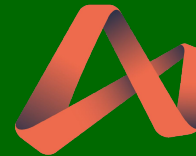
Focussing and Investing in Risk Assessments for Risk Reduction

- Regional assessments are a good intermediary tool.
- BUT they are not the silver bullet:
 - Cookie cutter regional scale assessments will generally NOT support risk reduction actions.
 - They can support setting the goal posts and priorities.
- Data and methods should be aligned with the scale AND with the purpose.
- These assessments are expensive, especially given data gaps; think then do.

→ Purpose first!



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