



URBC – Disaster Risk in British Columbia

Emergency Management BC

November 2, 2020



BRITISH
COLUMBIA

Risks in British Columbia



- **Landslide**
- **Flood**
- **Severe weather events**
- **Wildfire**
- **Tsunami**
- **Earthquake**
- **Pandemic**

<http://www.emergencyinfobc.gov.bc.ca/>

Risk Consequences 2017 - 2020

71,000+

evacuees from wildfires
and floods

660 +

structures damaged or
destroyed

\$1.6 B

response and recovery in
2017 and 2018

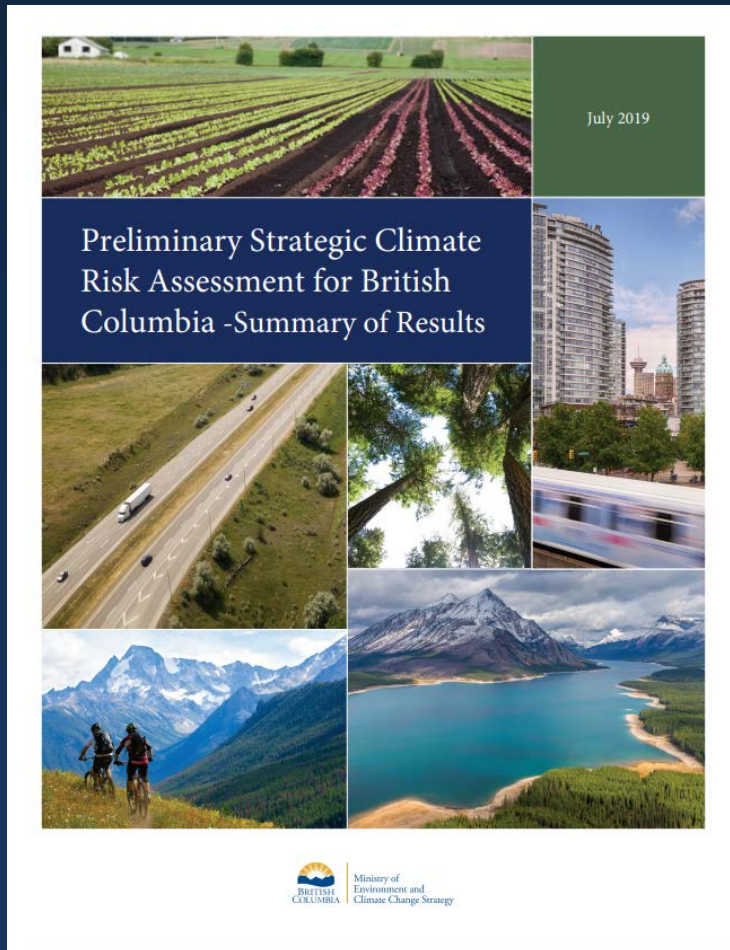
10,000+

Covid19 cases

3

Provincial states of emergency
2017: 71 days 2018: 24 days 2020: 215+
days



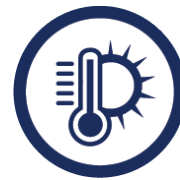


Preliminary Strategic Climate Risk Assessment for British Columbia

Preliminary Strategic Climate Risk Assessment

Risk Events and Scenarios: Discrete Events

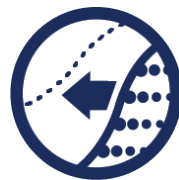
1. **Severe Riverine Flooding:** 500-year flood on the Fraser River
2. **Moderate Flooding:** Moderate flood in a single community
3. **Extreme Precipitation and Landslide:** Significant landslide in Hope triggered by extreme precipitation
4. **Seasonal Water Shortage:** Months-long summer water shortage affecting two or more regions
5. **Severe Coastal Storm Surge:** 3.9 m storm surge during a king tide along the B.C. coast
6. **Heat Wave:** Heat wave of at least three days that affects human health
7. **Severe Wildfire Season:** At least one million hectares burned that affect human settlements



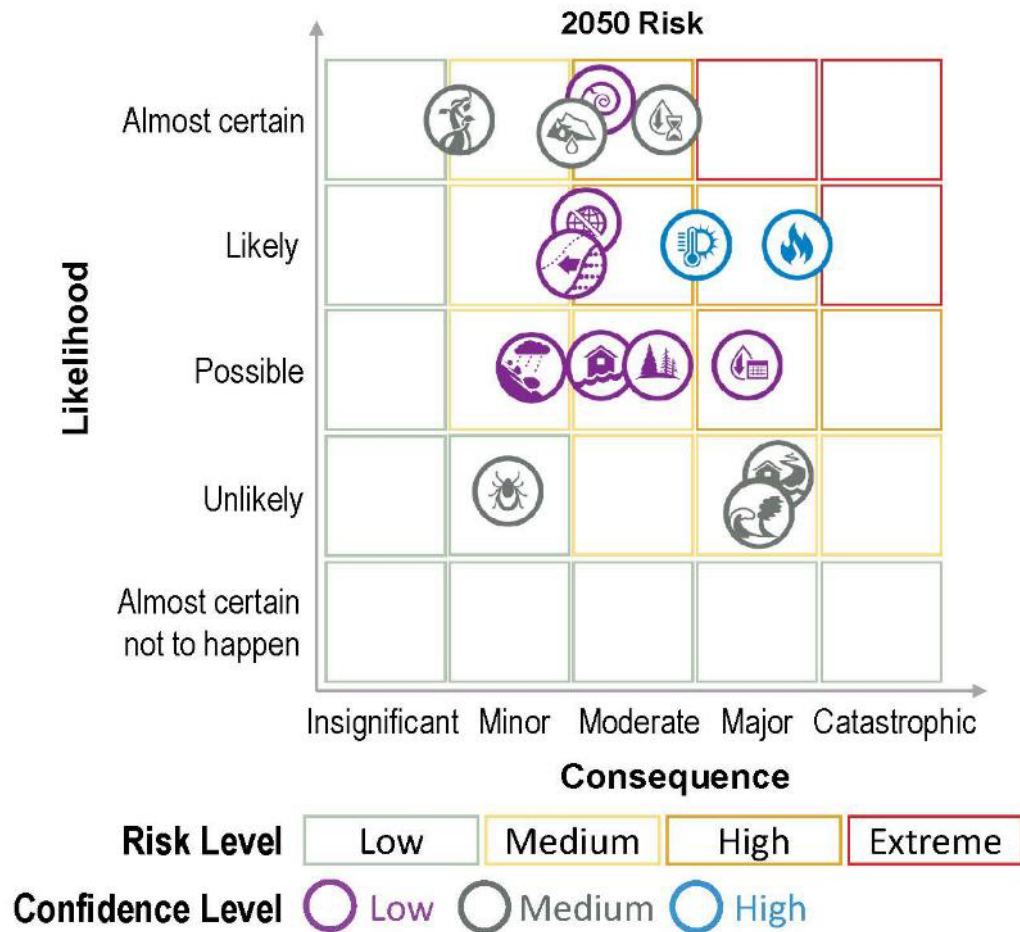
Preliminary Strategic Climate Risk Assessment

Risk Events and Scenarios: **Slow-onset Risks**

- 8. Long-term Water Shortage:** Multi-year water shortage in at least one region
- 9. Glacier Mass Loss:** 25% decline in glacier area by 2050
- 10. Ocean Acidification:** 0.15 reduction in pH by 2050
- 11. Saltwater Intrusion:** At least seasonal saltwater intrusion into the Fraser River delta and surrounding communities by 2050
- 12. Loss of Forest Resources:** 25% decline in timber growing stock by 2050
- 13. Reduction in Ecosystem Connectivity:** Reduction in ecosystem connectivity in the Okanagan-Kettle region by 2050
- 14. Increase in Invasive Species:** Expansion of knotweed by 2050
- 15. Increased Incidence of Vector-borne Disease:** At least a doubling of Lyme disease cases



Preliminary Strategic Climate Risk Assessment Overall Results

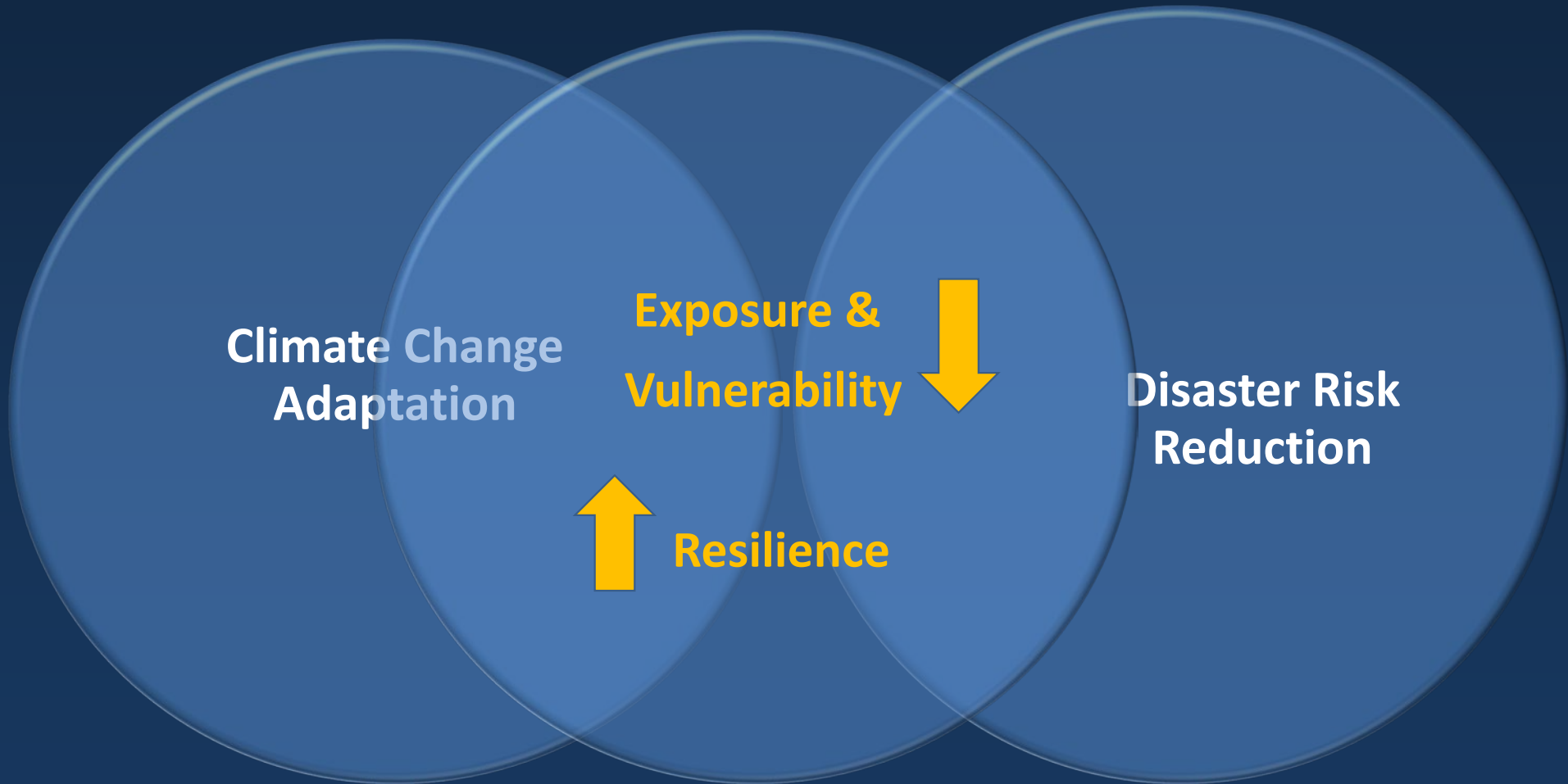


Highest-ranked Risks

- Severe wildfire season – High
- Seasonal water shortage – High
- Heat wave – High
- Ocean acidification – High
- Glacier mass loss – High
- Long-term water shortage – High

Lowest-ranked Risks

- Increased incidence of vector-borne disease (Lyme disease) – Low



1. **Understanding** disaster risk
2. Strengthening disaster risk **governance** to manage disaster risk
3. Investing in disaster **risk reduction** for resilience
4. Enhancing disaster **preparedness** for effective response, and to **“Build Back Better”** in recovery, rehabilitation and reconstruction



BC Integrated Earthquake Risk Assessment

- Collaborative project with NRCan and GEM
 - Includes involvement from GeoBC
- Assessment of earthquake risk & risk reduction potential in BC
 - Development of a framework of performance based earthquake risk indicators
- An enhanced understanding of earthquake risk is anticipated to:
 - Support emergency planning, preparedness, and mitigation
 - Help inform ongoing initiatives such as emergency management legislation modernization
 - Help enable a consistent approach to communicate earthquake risk

Thank you

Dave Peterson
Assistant Deputy Minister

Emergency Management BC

