

UR Understanding Risk

British Columbia
URBC 2023
Cascading Hazards, Multihazard Solutions

We are Thrilled to Announce the URBC 2023 Program!

Since 2017, the Understanding Risk BC (URBC) symposiums have been bringing people together in a way that fosters the necessary, interdisciplinary, 'all of society' approach to reducing risk and building resilience in Southwest BC. The community-based symposiums have worked to shift the conversation from risk assessment/analysis (*what can we expect?*) to an evaluation of risk reduction strategies to help build resilience through proactive plans, policies and investments (*what actions are needed and how best to implement/finance them?*; *what are the priority actions with the greatest risk reduction potential?*).

The objectives of the URBC Symposiums are in line with the priorities for action of the *Sendai Framework for Disaster Risk Reduction (2015-2030)*, which was adopted by the BC government in 2018. These same priorities are in line with and in support of the *National Emergency Management Strategy for Canada: Toward a Resilient 2030* and its current focus on earthquakes, floods, and wildfires. The symposiums also aim to 'demonstrate by doing' many of the elements/pathways in the provincial (aka. CPAS) and national adaptation strategies (aka. NAS) at regional scale.

We thank everyone for being a part of this *journey* and contributing to the *solutions* for a more resilient BC (and beyond!). We are excited to see you at this first in-person gathering of the community since 2018.

October 11th (Half-day @ Science World)

12:15pm: Registration opens with Still Moon puppets & stilters

1pm: Welcome & reflections on the theme: Cascading Hazards, Multi-hazard Solutions

- **Welcome from Musqueam Elder, Gail Sparrow:** Reflections on the theme of 'cascading hazards, multi-hazard solutions' in Southwest BC.
- **& Bowinn Ma (Minister, Emergency Management & Climate Readiness (EMCR)):** Reflections on the theme of 'cascading hazards, multi-hazard solutions' in Southwest BC and the upcoming provincial risk assessment and DRR planning work.



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1:20pm: Level-set with Jessica Shoubridge (URBC Program Lead 2016-present)

- UR overview (global to local): The value of dialogue, enhanced collaboration and innovation in an era of increasing risks.
- Overview of agenda & housekeeping.

1:35pm-2:35pm: Panel Discussion 1: AC ain't the only fix! Why BC needs a comprehensive approach to managing extreme heat.

Moderated by: Tamsin Mills, Adaptation Collaborative

Featuring: David Harrison (Emergency Planning and Response, Squamish Nation), Meghan Straight (Vancouver Coastal Health), Alex Price (Associate Executive Director, Sparc BC), Ralph Wells (UBC)

Extreme heat events are projected to increase in frequency and intensity with climate change. Prior to the unprecedented 2021 heat dome, comprehensive planning for extreme heat was limited in B.C. However, the event and subsequent after-action assessments have yielded valuable information about individual and community impacts, heat related vulnerabilities and opportunities for action. Increased awareness and substantial progress in planning since 2021 have yielded positive results. Join our panel discussion to explore advancements in extreme heat preparedness and identify persistent challenges. Our focus will be on three key areas: people power, buildings and community design.

2:35pm: Transition to Break: The Adaptation Mindset: A learning & unlearning journey *with Trevor Murdock*

2:40pm-3pm: Health break with Still Moon puppets & stilters

3pm-4pm: Panel Discussion 2: How do we Value that?!: Understanding climate risk and technology in real estate appraisals.



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Moderated by Peter Sun, Vancouver Economic Commission

Featuring: Mark Sakai (BCREA), Hamid Etebarian (Offerland Technologies), Curtis Cossey (CDC Inc).

Real property is at risk of climate change. Regardless of property type, real estate appraisal plays a critical role for lenders, investors and insurers. With the rapid enhancement in valuation technologies, appraisers can now include more factors, such as climate risk, in their calculations. The goal of the session is to daylight the current discussion of climate risk and technology in real estate valuation and further explore opportunities and enhance collaboration in risk awareness and value generation for Southwest BC and beyond. This group of experts will share their expertise in their respective fields, such as the basics of appraisal, current valuation technologies, market understanding of climate risk, and market adoption and acceptance of climate risk in real estate.

4-5pm: Panel Discussion 3: More than just Maps!.. Applying the latest & greatest in regional seismic microzonation mapping and basin modelling in practice; from land use and emergency management planning to building design and retrofit.

Moderated by: Allison Chen, Engineers and Geoscientists of BC

Featuring: John Sherstobitoff (Ausenco), Carlos Molina Hutt (UBC), Tamsin Mills (Adaptation Collaborative).

This panel is designed to appeal to a wide range of attendees and inspire passionate conversations about the best practice for the implementation and use of microzonation maps in BC. The panel will provide a general introduction of microzonation maps then dive into some details of the Metro Vancouver Seismic Microzonation Mapping Project. From there, the multi-disciplinary panel will try to predict the future as it relates to opportunities and challenges:

- utilizing microzonation maps as an input to land use planning and municipal risk assessments;
- incorporating microzonation maps into the workflow of structural and geotechnical engineers;
- understanding basin effects and their effect on building design; and
- adhering to potentially conflicting expectations between code requirements and best practice.



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This panel will be interactive. Please bring questions and ideas for discussion.

5pm: Close out programming for the day & set up for the following day with *Jessica Shoubridge*

5:15pm-8:15pm: Opening reception

- Please stick around to use your complimentary drink ticket, and to mingle with colleagues & collaborators. (*CARD bar only, no cash*).
- Featuring musical contributions from **Jillian Lebeck** on keyboard & **Kody Buchart** on bass.
- Light catering via: **The Lazy Gourmet**.

October 12th (Full day @ SFU Wosk Centre for Dialogue, Asia Pacific Hall)

8:15am Registration opens with Still Moon puppets & stilts

8:45am: Open and overview of the day's activities

Featuring: **Jessica Shoubridge** (URBC program lead)

8:55am Opening reflections on the theme: Cascading Hazards, Multihazard Solutions

Featuring: **Tamsin Lyle** (Ebbwater Consulting) & **Kris Holm** (BGC)

9:20am-10:20am: Panel Discussion 4: Mt. Meager: taking an 'all of society' approach to cascading hazards in the Pemberton Valley to foster locally adapted solutions.

Moderated by: Veronica Woodruff, Clear Course Ltd.

Featuring: **Jordan Sturdy** (Resident & MLA West Vancouver-sea to sky), **Kevin Clark** (Pemberton Valley Dyking District, Operations Manager), and **David Ward** (Lilwat Nation Engineer).



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The rapidly growing rural community of Pemberton, BC is located within Lilwat Nation Traditional Territory, ~2.5 hours north of Vancouver. Pemberton lies next to Mt. Meager, Canada's most active volcano and the site of the largest landslide in Canada in 2010. The landslide debris has significantly increased flood risk through the populated areas of the valley threatening property, infrastructure, a provincial transportation corridor, and utilities. The community is accordingly faced with a range of cascading threats, and local governments, including Lilwat Nation, have been developing a collaborative network to address these risks. A collaborative, all-of-society approach is heralded as best practice for reducing risk by international United Nations guidance, federal and provincial policy, and local emergency planning. However, there are multiple barriers to implementing locally relevant solutions across the siloed nature of the vertically separated areas of authority. There is a significant lack of opportunity to be adaptive in mitigative measures for local protection when considering policy, permitting, and logistical barriers established at these multiple levels of authority. This session explores: how a collaborative approach has been initiated within the Pemberton Valley Emergency Management Committee, the benefits and barriers to collaboration, and the ways in which we can we stop letting perfection get in the way of progress in terms of reducing disaster risk.

10:20am: Coffee/tea break + Living with Water Interactive Timeline Mapping Exercise - Round 1 with Vanessa Lueck (PICS)

11:30am-12:30pm: Panel Discussion 5: Managed vs. un-managed retreat: successes and challenges in the Canadian context.

Moderated by Sharmalene Mendis-Millard, Partners for Action.

Featuring: Featuring: Tribal Chief Tyrone McNeil (Stó:lō Nation, a member of Seabird Island Band, and Chair of the Emergency Planning Secretariat (EPS)), Sean Strang, (Director of Flood Recovery and Mitigation, City of Merritt), Brent Doberstein (University of Waterloo).



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As climate impacts intensify, communities will require transformative adaptation strategies that reduce risk and address vulnerabilities. One such strategy is managed retreat, where people, property, and critical infrastructure are strategically relocated out of areas prone to recurrent climatic hazards. We are already at the whims of ‘unmanaged retreat’ in the form of emergency evacuations and emerging private sector policies that shape real estate and financial markets toward or away from settlements in high hazard-risk areas (e.g., property-level climate risk ratings, areas/buildings that are insurable vs not, and loans unavailable for rebuilds in hazard-prone areas). To proactively reduce acute and chronic physical climate risks, we need long-term planning that does *not* include a) costly and frequent government bailouts (e.g., disaster aid) and b) infrastructure rebuilds to prior conditions instead of designing for a new climate reality.

How can we be intentional about where people and critical infrastructure are spatially located, and about how to move them out of high climate risk areas in an equitable way? Hear from practitioners about on-the-ground challenges and opportunities to break the cycle of increasing climate risks and damages, including why managed retreat has few examples to date in Canada.

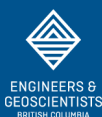
12:30pm Lunch break + Living with Water Timeline Mapping Exercise- Round 2

1:30-2:30pm: Panel Discussion 6: Mitigation Saves, BUT WE DON'T DO IT. Can multilateral incentives for earthquake, flood and fire change that?

Moderated by Keith Porter, Institute for Catastrophic Loss Reduction (ICLR)

Featuring: Andrew Pape-Salmon (EMCR), Don Iveson (Cooperators), Becky Denlinger (Deputy Minister, EMBC, ret.), Chris Chopik (ICLR)

Since at least 2005, it has been clear that natural hazard mitigation saves society more than it costs, with benefit-cost ratios of 13:1 or more. Despite the big-picture value of mitigation, society invests far less in mitigation than makes economic sense. Partly as a result, Canadian and US catastrophe losses continue to grow unsustainably, 10 times faster than the population and several times the growth in



gross domestic product. The ICLR and its colleagues suspect that the reason for the investment gap is that the societal interests do not align: owners and developers pay for resilience while others benefit. We have designed multilateral, coordinated incentives whereby municipalities, insurers, real estate agents, and others encourage and help owners and developers pay for standardized resilience measures. But how and where to test the idea? In this discussion, we will review the concept of incentivization, and then discuss where and how to launch a pilot study: how to recruit participants and allies.

2:35pm-3:35pm Panel Discussion 7: Resilient Buildings in BC: Barriers & Enablers for Adaptation & Risk Reduction.

Moderated by Jessica Wolliams (BC Housing)

Featuring: **Harshan Radhakrishnan** (Engineers and Geoscientists of BC), **Daniel Clarke** (Daniel Clarke Architect, AIBC), **Tina Neale** (EMCR) & **Wilma Leung** (BC Housing)

Climate change adaptation and disaster risk reduction (DRR) within the context of buildings is a topic of interest to governments, regulators, academic, professional and non-profit organizations working to protect the public interest. Even though a range of tools and guidance have been developed in the last few years to deal with multiple and cascading hazards, implementation remains challenging for several reasons including lack of knowledge and capacity at the grass-roots level, funding and governance structures to manage risk, and information overload and siloed approaches to decision-making. Despite the challenges, there has been progress in integrating disaster risk reduction (DRR) and resilience in both new and existing buildings and efforts are underway to deal with these risks in a holistic manner. This session will provide an overview of efforts by private and public sector actors in addressing climate and disaster risks for both new and existing buildings.

3:40pm-4:25pm: Putting the *Resilience* in Disaster Risk Reduction: From assessment to action in B.C.



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Facilitated by: Sahar Safaie (Sage on Earth Consulting)

Featuring: **Tina Neale** (Executive Director, Disaster Mitigation and Adaptation, EMCR), **Dominique Sigg** (Manager, Disaster Risk Assessment, EMCR), **Andrew Pape-Salmon** (Executive Director, Strategic Initiatives, EMCR)

The Ministry of Emergency Management and Climate Readiness and Ministry of Environment and Climate Change Strategy have a mandate to develop a Disaster and Climate Risk and Resilience Assessment for the province, followed by a Risk Reduction Strategy. This innovative project will bring together an assessment of disaster and climate risk, and will take a strengths-based approach to understanding our collective and diverse resilience across the province. Join us for a brief overview followed by an interactive discussion – we want to hear from you! What does success look like as we develop a provincial and subsequent regional assessments? What does a resilient future look like in B.C. and where do you think we need to focus our efforts?

4:30pm- 4:45pm Closing & Gratitude

- Synthesis of opportunities and challenges, reflections from participants re: Enhancing Regional Risk Governance in Southwest BC.
- Opportunity to add to the LWW timeline mapping.

5:15pm- 8:15pm: Apres: EERI BC AGM / Social at Rogue

EERI BC is the sole organization dedicated to earthquake risk reduction in BC. Please join our AGM meeting and hear from local SMEs about ongoing initiatives to reduce earthquake risk in Southwest BC.

Featuring: **Alison Bird** (Natural Resources Canada) speaking to the topic of the earthquake early warning role out for spring 2024 & **Andrew Metten** (Senior Partner, BushBohlman) speaking to the tsunami vertical evacuation tower in Tofino.

