

DRR Roundtable 2020



**2020 VIRTUAL
CRHNet SYMPOSIUM
& DRR ROUNDTABLE**

**COLLOQUE ET TABLE RONDE VIRTUELS
SUR LA RÉDUCTION DES RISQUES DE
CATASTROPHES DE CRHNET 2020**

 **CRHNet**
CANADIAN RISK &
HAZARDS NETWORK



Roundtable funded by the
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Canada 

October 15, 29 and November 12, 2020
DRR Roundtable Event

Produced by
Canadian Risk and Hazards Network

To view any of the sessions, please visit: <https://crhnet.ca/v-e-playback/>

History

The Annual National Roundtable facilitates coordination and implementation of Canada's Platform activities and serves as a multi-stakeholder forum for discussing national Disaster Risk Reduction issues and information sharing. Participation is open to any interested parties, departments, organizations, or individuals concerned with reducing the risks posed by disasters, including members of the private sector, all levels of government, non-governmental organizations, students, and the general public. Since the Platform's inception, nine Roundtables have been held in locations across Canada.

The Event

Under the category of *Communications/Information Exchange Projects, Canadian Risk and Hazards Network (CRHNet)* proposes to manage an initiative wherein CRHNet will combine what was previously known as the Annual National Roundtable on Disaster Risk Reduction (DRR) with CRHNet's Annual Symposium starting in 2020.

"Public Safety Canada is proud to support a new pilot initiative for the 2020 Roundtable on Disaster Risk Reduction," says Stéphanie Durand, Director General for Emergency Management Policy and Outreach at Public Safety Canada. "This pilot is an opportunity for CRHNet to play a leadership role in organizing and planning the Roundtable. It will also improve efficiency by jointly planning two events that both bring together DRR stakeholders across Canada."

CRHNet hosted the annual CRHNet Symposium and the 2020 Roundtable in a virtual format this year due to circumstances changing with the global pandemic. While many of the initial plans were based on an in-person event in Ottawa, we quickly pivoted to an online format to ensure that the work of these initiatives was actualized, even though differently than originally anticipated. We could not at the time of the planning understand the pressures, commitment and capacity challenges the industry was and still is facing.

"CRHNet is excited to be offering these programs online and virtually in the fall of 2020," says CRHNet President, Patricia Martel. "We feel this innovative approach, with travel being removed from the equation, will allow more people to participate. CRHNet will explore challenges and solutions from a multi-sector contingent and better understand what current obstacles are preventing better DRR solutions. This format will also allow us to highlight many solutions and efforts that are being utilized and tested to improve resiliency in Canada."

OBJECTIVES

To contribute and guide the enhancement of Disaster Risk Reduction and Emergency Management, for a more resilient Canada, by supporting broad emergency management including the following:

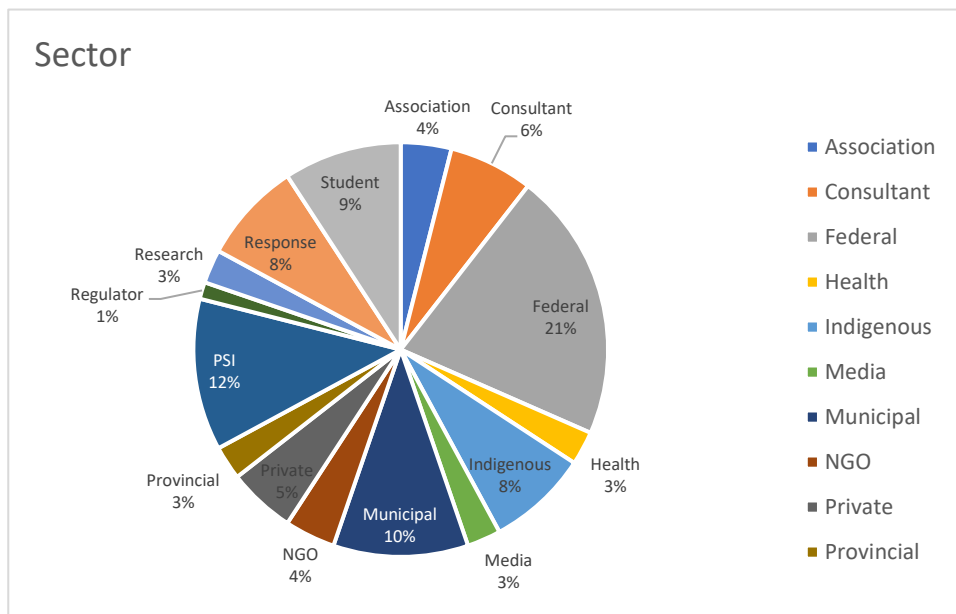
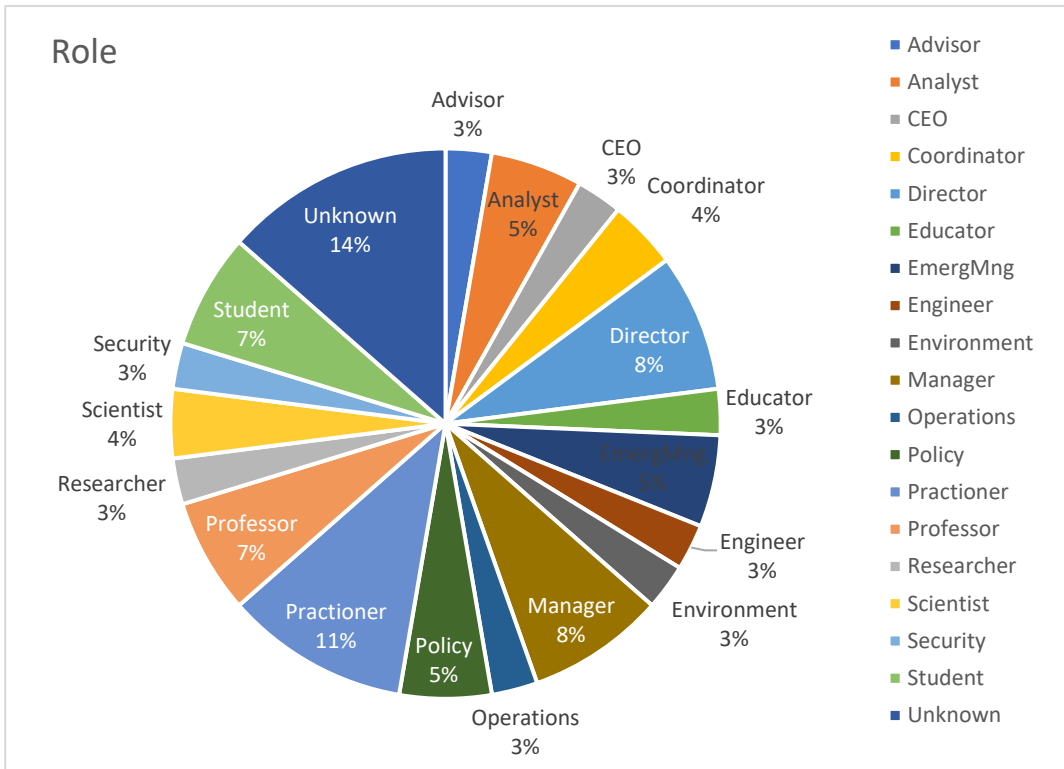
- Enhance whole-of-society collaboration and governance to strengthen resilience.
- Improve understanding of disaster risks in all sectors of society.
- Increase focus on whole-of-society disaster prevention and mitigation activities.
- Enhance disaster response capacity and coordination and foster the development of new capabilities.
- Strengthen recovery efforts by building back better to minimize the impacts of future disasters.
- Enhance and improve understanding of whole-of-society collaboration and governance to strengthen resilience.
- Increase focus on whole-of-society disaster prevention and mitigation activities.
- Enhance disaster response capacity and coordination and foster the development of new capabilities.
- Strengthen recovery efforts by building back better to minimize the impacts of future disasters.
- To work in an integrated manner to reduce risk, vulnerability and impacts of natural and non-natural disasters to Canadians.
- Provide a coordinating mechanism for DRR across sectors and using our existing networks.
- To support stakeholders with relevant knowledge and information; and
- Support communication/information exchange in the priority areas of public safety and emergency management.

Collaborative dialogue that addresses:

- Improving the understanding of and engagement with disaster risk initiatives.
- Innovative approaches to acquiring knowledge through speakers, knowledge sharing and creation of an interactive forum that facilitates retention and sharing of information and results.
- Representation from each sector (Government, Non-Government Organizations, civil society, Emergency Management practitioners, academic and post-secondary institutions, emerging professionals, and Indigenous communities) were present at the DRR Roundtable.

The Audience

The attendees were diverse in several areas including Government, Non-Government Organizations, civil society, emergency management practitioners, academics and post-secondary institutions, emerging professionals, and Indigenous communities and more. This enabled the enhancement of whole-of-society collaboration and governance to strengthen resilience. This is critical to be able to improve the understanding of disaster risks across a broad range of society. Collaborating in this integrated manner fosters the ability to reduce risks, vulnerability and impacts from disasters in Canada and beyond. The goal was to improve attendance, engagement, interest, and representation of DRR Roundtable participants from all sectors.



The Presentations

A call for presentations opened in August, and we communicated with DRR Roundtable alumni and industry people seeking presentations that could...

- Facilitate Engagement,
- Build Awareness,
- Spotlight Technology,
- Improve Communications, and
- Feature “Resilience Realized” examples with diversity and inclusion in mind.

The DRR Sessions were held in tandem with the CRHNet Symposium and were the focus of three, three-hour sessions that included 14+ sessions for nine hours of programming.

There were updates on projects and initiatives from previous DRR RTs, and presentations and panel discussions that provided insight from different perspectives and an improved understanding of disaster risks in all sectors.

The Programming

Providing a platform to support stakeholders with relevant knowledge and information to both share and take in is key for facilitating communications, information exchange and platforms to engage and collaborate in an integrated manner.

The Format

To ensure continuity, we engaged a Canadian Screen Award winner to host the sessions. Having reported on and from many disasters ranging from the 1987 Alberta tornado, Slave Lake and the Ft. Mac fires, Daryl McIntyre’s unique, inquisitive manner engaged both speakers and attendees and made a huge impact on the engagement.

Thursdays October 15 - November 19, 2020
9:00AM PST/12:00PM EST - 12:00PM PST/3:00PM EST

2020 VIRTUAL CRHNet SYMPOSIUM & DRR ROUNDTABLE

Daryl McIntyre, Emcee and Host

 **CRHNet**
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The Differences

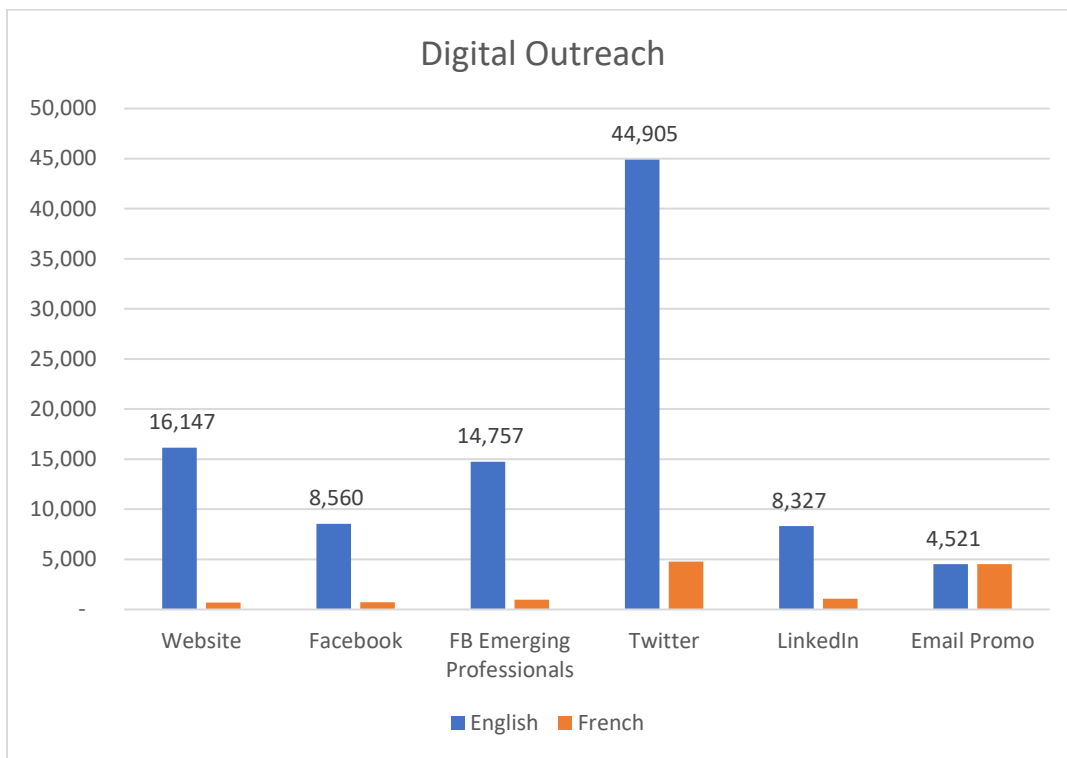
There is a distinct difference between an in-person event and a virtual format. There are not the same opportunities to facilitate actual roundtable conversations and collaborations.

There are many benefits as well including increased exposure for the program through digital assets and an increased audience that becomes more familiar with DRR through the outreach.

Social Media

From September 1 – November 30th we had 105,464 impressions, views and/or visitors through our digital platforms.

With the virtual program we are also able to make available all presentations available post-event. We have the videos and PowerPoint slides for the presentations listed below. This summary is intended to be used with the playback content.



Session #1

The opening presentation focused specifically on Principle D of the Sendai Framework. We argue that an emerging framework, “Just Resilience,” combining the key tenets of environmental justice, resilience and emergency management, works towards achieving this Principle. It was engaging and worked towards an enhanced whole-of-society collaboration and governance to strengthen resilience.

Next, the presentation focused on disaster narratives, the individual, community and cultural stories we try to use to place disasters within an explicable conceptual, cultural and emotional framework.

Many left with a better understanding of how personal stories, media reporting, institutional analyses and after-action reports and impacted by how people are able to “Sensemaking in Crisis.” This innovative approach was an informative session that facilitated perspectives on framing situations to improve outcomes.

An update on the previous initiatives from the Core Competency Working Group provided updates and discussions from this engaged panel. It discussed the nature of the strategy; including appropriate participant groups, regional and sector implications, and necessary tools to leverage in a COVID-19 environment. The knowledge gained through this shared exploration will directly inform the working group’s overall engagement strategy.

The working group reviewed all communications in the last session at the Symposium on next steps and future engagement. This provided new insight from an expanded audience that can now continue to enhance whole-of-society collaboration and governance to strengthen resilience.

We rounded out this session with a communication focused presentation that explored the reality that “It’s not what is said, it’s what’s HEARD.” This is a critical message especially during a pandemic that many gained insights from.

The Presentations

Moving Sendai Towards “Just Resilience”

Brenda Murphy, Chair, Social and Environmental Justice and **DRR RT Alumni**
Bryce Gunson, Project Manager, Resilient Communities Research Collaborative and Lecturer
Wilfrid Laurier University

This presentation focuses specifically on Principle D of the Sendai Framework. Principle D states that DRR requires a whole-of-society engagement, empowerment, inclusive and accessible participation, with special attention to those disproportionately impacted by crises. To address the needs of marginalized groups and increase resilience, consideration of socio-economic factors including class, gender, age, disability and culture/race/ethnicity should be integrated into all DRR policies and practices. We argue that an emerging framework, “Just Resilience,” combining the key tenets of environmental justice, resilience and emergency management, works towards achieving this Principle. “Just Resilience” is defined as the ability to proactively prepare for, and rebound from, crises and changes in a way that increases future emergency management capabilities, prioritizes the needs of the most vulnerable, and addresses social inequities across a range of dimensions (location, age, class, gender, etc.) (Agyeman, Schlosberg, Craven, & Matthews, 2016, p. 574). In this presentation we provide an overview of the framework and outline the best practices for practitioners, policymakers and researchers.



Thinking about their resilience and ability to be involved. Marginalized groups should be perceived as empowered, with due consideration to their own history, thoughts, capacities, and abilities. Start from a strength-based place. Where would you like to go?

Narratives of Disaster: Sensemaking in Crisis

Dr. David Etkin, Professor, Disaster & Emergency Management, **DRR RT Alumni** and
Prof. Peter Timmerman from **York University**

Storytelling as a way of understanding the world around us, both literally and metaphorically, is a powerful tool. Disasters come in many shapes, sizes and forms, but have in common the need for people to make sense of these tragic events that disrupt their perception of normalcy, and perhaps even their worldview. The process of sensemaking is not limited to times of crisis; it occurs continually throughout our lives, but is particularly active and important during times of crisis. Part of what makes disasters is the potential for bewilderment: What is going on? What are the threats? What do I have to do? Will we survive? And so on. Trying to make sense of things throws us into temporary or permanent narratives — storytelling. This paper is

about disaster narratives, the individual, community and cultural stories we try to use to place disasters within an explicable conceptual, cultural and emotional framework.

Disaster narratives do not begin with a damaging event, but rather are pre-existing constructs that people tap into when explanatory frameworks are needed. They then form the basis of personal stories, media reporting, institutional analyses and after-action reports. These narratives are heavily imbued with morals, judgments and descriptions of our relationship to the world around us, though they are often implicit in the language, tone and metaphors used rather than explicitly stated.



If we want to understand human behaviour, how human behaviour relates to what we do in DRR, we must get into their heads, means seeing the world from their eyes, seeing and understanding the kind of narratives they are seeing disasters in. One of the main takeaways, I don't think we do enough of that.

Everyone is constructing a narrative constantly all the time. If you look at COVID, everyone is constantly interpreting the news and trying to shape the next phase of the narrative, projecting not the new future, everyone that's here is a construction of their own version of the narratives from the news, statistics, and we are just not working on that shaping their own story. A way of thinking of that, humans are actively trying to understand the world and we tend to flatten this out. Everyone is really hard at work trying to figure out what to do next. Disasters shake people up.

Core Competency Working Group Area of Exploration

Vanessa Howard, Chair; Core Competencies Working Group, IAEM Canada and Calian Group

Jack Lindsay, Brandon University, DRR RT Alumni

Jodi Manz, CRHNet and NAIT

The emergency management core competency project was a Public Safety Canada (PSC) initiative supported by the IAEM Canada, CRHNet and others, including strong representation from Canadian academia. Important work toward this initiative was completed in 2017 however the working group had to focus on other priorities, and active work on this project paused.

In alignment with PSC's commitment to strengthening interoperability and coordination, IAEM Canada has re-invigorated this important project and has begun the initial work related to developing a framework for the emergency management core competencies in Canada. The Core Competency Working Group has formed to inform/develop an Emergency Management Competency Framework within Canada that will be relevant to

the diverse makeup of Emergency Managers and align with priorities for Canada. The intent of the Framework is to inform national training/standards for practitioners/roles/succession of roles.

In order to ensure relevance and inclusion of the diverse emergency management audience, the working group will create a pan-Canadian engagement strategy. This strategy will be informed by the proposed Area of Exploration in which we will discuss the nature of the strategy; including appropriate participant groups, regional and sector implications, and necessary tools to leverage in a COVID-19 environment. The knowledge gained through this shared exploration will directly inform the working group’s overall engagement strategy.



We’re no longer just seeing people in their 2nd and 3rd degrees; we are now seeing young people coming out of high school thinking this is a see this as an important credible career stream for them. We should consider how we can best facilitate career paths that lead to jobs in emergency management.

Communication is NOT what is said, It’s always what is heard!

John Robertson President, **FORTLOG Services**

Have you ever noticed that when there is a critical event happening, people don’t always seem to ‘get it?’ Sometimes they are told something, or even what to do, yet within 5 minutes they seem to have misplaced what they were told to do. Additionally, some people think that saying it louder will help. The issue is comprehension not deafness.

What can very easily happen during a crisis is the kids’ ‘broken telephone’ game. When communication is focussed on merely sharing information, the result will often be unclear by the time it gets to the third or fourth checkpoint. Then when external inputs have their influence, including media of any form, the result can create such a ripple that the plan requires more work and effort without yielding the result that had been hoped for.

The ripple of this approach can last well beyond any emergency. In truth, since it takes emotion to make a memory stick, and how people feel is not about emotions but about impact, the result can be leadership gets compliance without ownership. This can be a nail of death for a healthy, thriving workforce, never mind successful leadership.

Developing a Canadian Risk Index: Canadian Hazards and Risk Information System (CHaRIS)
 Dave Blaine, GIS Analyst, CADEM at NAIT

Flood Response during Covid-19: A dynamic dashboard of hazard and socio-economic variables DEM
 Heather McGrath, Geospatial Scientist
 Canada Centre for Mapping and Earth Observation at NRCan

Supporting Long-term Climate Resilience In Canada Through Planned Retreat
 John Sommerville, NRCan
 Dr. Brent Doberstein, University of Waterloo
 Michael, Bernard and Dr. Patrick Saunders-Hastings, Gevity Consulting

GBA+ and an Intersectional Approach to Emergency Management
 Alex Valoroso, Senior Advisor // Gender & Disaster Management Specialist
 EM BC & Valoroso Consulting

Why We Fail to Plan for the Foreseeable
 Laurie Pearce, Research Chair at JIBC

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Featured Presentations
 Thursday, Oct. 29, 2020
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Session #2

This session offered something for everyone’s interests and exposure to topics that were new to some. From technology, climate change, diversity and resilience in lessons learned.

CADEM, in partnership with AUMA, provided a demonstration of a map-based risk assessment tool identifying the intersections of the built environment, natural hazards, and social and community data to calculate a baseline, multi-hazard risk measurement.

This proof of concept aimed to solicit broader participation and partnerships to move the project forward to support data-based decision-making for more resilient communities. As a result of this session, many introductions were facilitated to future collaboration and data sharing across newly introduced networks.

The next session continued the use of state-of-the-art technology and data with a partnership between Statistics Canada and Natural Resources Canada. A joint effort has been put in place to develop a dynamic online dashboard for emergency response.

The dashboard quickly highlights many valuable socio-economic variables including the total population in the map extent. It was quickly understood that data sharing between different data sets and technologies can provide a mechanism for DRR across sectors using existing networks. The next phases of this project were recently highlighted in the HazNet magazine for even more exposure.

Next, there was a provocative presentation that asked why we fail to plan for the future by looking at major events from the past with recommendations for being better prepared in the future to face what is inevitable. It was engaging and eye-opening and facilitated an interesting discussion on increasing the focus on whole-of-society disaster prevention and mitigation efforts.

Diversity rounded out this session, teaching attendees how GBA+ and its use as an analytical process can be used to assess how diverse groups of women, men, and non-binary people may experience policies, programs, and initiatives. It explored how inclusion and diversity of perspectives is fundamental to foster the development of new understandings.

The Presentations

Developing a Canadian Risk Index: Canadian Hazards and Risk Information System (CHaRIS)

Dave Blaine, GIS Analyst,

Tracy Blaine, Manager

Centre for Applied Disaster and Emergency Management (**CADEM**), Northern Alberta Institute of Technology (**NAIT**)

The Canadian Hazards and Risk Information System developed by CADEM in partnership with AUMA provides a map-based risk assessment tool identifying the intersections of the built environment, natural hazards, and social and community data to calculate a baseline, multi-hazard risk measurement.

Traditional risk assessment has focused on single-impact incidents within specific and narrow geographies, but the emergence of COVID-19 with widespread civil unrest and seasonal, natural hazards has forced us to consider coordinated responses to concurrent, mutually constraining events.

CHaRIS uses the best-available, authoritative current and historic data sets with statistical analyses to provide pre-calculated, baseline risk assessments for Canadian communities to pinpoint inconsistencies in risk identification, mitigation, and planning; inform new approaches and allow community planners to prioritize resource allocation. Beginning with data for Alberta municipalities, this initiative leverages established and on-going research from subject matter experts in government, industry, and academia as well as data science and machine learning techniques to summarize multi-hazard variables across Canada.

This presentation will serve to both highlight the current tool developed for two Alberta municipalities to serve as a proof of concept, and solicit broader participation and partnerships to move the project forward to support data-based decision-making for more resilient communities.



This has demonstrated beyond our wildest expectations that what we need is collaboration, intersections within the system and those contributing to this system. Critical that we revise the approach to incorporate the entirety of the system. As things are happening all at once, it may be problematic to plan for a multi hazard crisis. For the way forward, the new normal, and systems like this are going to be critical to planning, mitigating and allocating the resources we do have in order to meet those challenges and face those problems to improve DRR.

Flood Response during Covid-19: A dynamic dashboard of hazard and socio-economic variables for the emergency management community.

Heather McGrath, Geospatial Scientist, Canada Centre for Mapping and Earth Observation and Vincent Decker, Natural Resources Canada
France Labrecque, Statistics Canada

During a disaster, especially during Covid-19, identifying the areas where emergency response and support are needed most is challenging. In a partnership between Statistics Canada and Natural Resources Canada, a joint effort has been put in place to develop a dynamic online dashboard for emergency response. It combines the latest Census of Population data from Statistics Canada along with active flood maps from NRCan Emergency Geomatics Services. By leveraging state-of-the-art technology to combine datasets shared via open data standards, a new web-based tool has been developed to provide science-based data to support field decisions during an event. The dashboard quickly highlights many valuable socio-economic variables including total population in the map extent (or selected area), age profiles, family size, language profiles and ethnicity, among others.

Limited details on housing in the affected area are also included. Additionally, the operational status and location of communication towers and emergency facilities, including police, fire, hospitals, medical facilities and schools are viewable in this dashboard. To further support emergency response dispatch and activities, connections to provincial services indicating road closures are added. A beta version of this tool was released in spring 2020 and was tested by members of the Red Cross and several provincial government organizations. Feedback is being gathered and assessed for version 2, in anticipation of the next flood season.



I just really wanted to get the work out about this application and the work that we are doing to try to make information more acceptable by creating an open platform for data access and would love feedback and hope our work will be a positive benefit.

Why We Fail to Plan for the Foreseeable

Laurie Pearce, Research Chair, JIBC, DRR RT Alumni

The 1889 Russian Flu killed over 350,000 people. The 1918 Spanish Flu killed 50 million. The 1957 Asian Flu killed 1.1 million. The 1968 Hong Kong Flu killed 1 million. The 2009 H1N1 killed up to 500,000 and SARS in 2003 killed 774. In 2015, Bill Gates gave a TED talk called "The next outbreak? We're not ready." So why weren't we ready?

On January 27 1700, British Columbia experienced a 9.2 Mw earthquake and resulting tsunami that devastated the province. Scientists tell us that similar earthquakes have occurred along the length of the Cascadia Subduction Zone 19 times; but here in British Columbia the average recurrence is every 234 years. Why are we still not prepared?

On March 17 2020, "According to Steve Litke, a senior manager with the Fraser Basin Council, major flooding throughout the Fraser Valley could cause up to \$30 billion in damages and displace up to 300,000 people." Major Fraser River flooding has occurred in 1894 and 1948. Why are we still allowing people to build in the Fraser River Floodplain?

This provocative presentation will look at major events from the past, events that were predicted, and present some thoughts on why people were not prepared, how they could have been better prepared, and recommendations for being better prepared in the future to face what is inevitable.



100-year flood, with climate changes, is it now the 50, 20-year flood. All the work we are doing is important, just don't take the likelihood of when only, focus on IF.

The consequences are really important. Quantitative data is needed. I don't think we're going to come up with quantitative data that will let us predict when the next event is going to happen. Building that likelihood abased on when, I think skews the other information.

GBA+ and an Intersectional Approach to Emergency Management

Alex Valoroso

In this session, participants will learn how GBA+ and its use as an analytical process can be used to assess how diverse groups of women, men, and non-binary people may experience policies, programs, and initiatives. The "plus" in GBA+ acknowledges that GBA goes beyond biological and socio-cultural differences. In 2018, the Government of British Columbia committed to using GBA+ for policy, budget, and program decisions.

Explore examples of how GBA+ can be applied in the field and during decision-making processes, in particular for emergency management. The session will focus on a discussion about gender as a cross-cutting theme in disaster and emergency management, and the importance of integrating an intersectional approach to the four pillars of EM.



GBA+ Analysis is cross cutting. Should all be doing it and trying to implement this into our work. It's not the responsibility of one agency, or a particular sector of government. We just have to start doing it. Now it's time for implementation.

A National Earthquake Early Warning System for Canada
David McCormack, Director, Hazards Information at Natural Resources Canada

Sea Level Rise Doesn't Stop at Municipal Boundaries: The Case for Inter-jurisdictional Adaption Plans
Robin Hawker, Environmental Planner and Climate Change Adaptation Planning Initiative Lead, Kerr Wood Leidal
John Chapman, Emergency Manager, NorthShore EM

New Skills for a VUCA World
Donna Dupont, Chief Strategist, Foresight & Design at Purple Compass

Implementing Sendai: How Understanding Risk BC is Enhancing Whole-of-society Collaboration & Governance to Strengthen Resilience
Jessica Shoubridge, Founder and Principal, Thrive Consulting

Caring communities: Building resilience in Indigenous communities
Moderator: Lily Yumagulova, Editor of HazNet & Program Director for the Preparing Our Home Program with guests:
• Casey Gabriel, Volunteer Fire & Emergency Response team, Lil'wat Nation
• Devin Naveau, Elected Councillor, Mattagami First Nation
• Michelle Vandevord, Executive Director for Saskatchewan First Nation Emergency Management (SFNEM)

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Session #3

Stéphanie Durand, Director General, Public Safety Canada, opened this session with a welcome address. In summary, she acknowledged the unprecedented times, and the importance of continuing with the much-needed conversation on resilience and the need for a diversity of stakeholders to be able to share knowledge in these new formats and information with a whole-of-society focus.

Utilizing technology is a key element to increase focus on disaster prevention and mitigation activities. Events like this, whether in person or virtual, strengthen the foundation that forms the conversations to discuss and engage with each other to bring together a diversity of voices.

Ms. Durand emphasized the need for public awareness, education of risks, and leveraging lessons learned to improve data. There is also a need to form evidence-based strategies to contribute to building the National Risk Picture. PS will be launching online sessions in 2021.

All the efforts we make bring us closer to the Sendai Framework goal of 2030.

Specifically referenced was advancing flood mitigation DRR as this is the most expensive and costly disaster.

The following sessions speak to these priorities.

NRCan exposed the development of the Earthquake Early Warning System for Canada, describing the analysis and modelling of requirements and resulting proposal design for the Canadian system. This speaks directly to the goals of the Roundtable, including building evidence, facilitating a better understanding risk and capacity, utilizing technology to collect and share data, and more.

Next, the case for inter-jurisdictional adaption plans was explored. This presentation highlighted lessons learned from the regional risk assessment and strategy development process and the challenges and opportunities different approaches offers for managing flood risk on a regional scale.

Attendees were also introduced to the concept of VUCA (volatility, uncertainty, complexity, and ambiguity) and reviewed key skill sets and methods used to build resilience and thrive in a turbulent environment. Using strategic foresight and future scenarios, as well as complexity and ambiguity with systems-thinking and design-thinking, provides insight from a different perspective that can benefit all.

The ‘Supporting Long-term Climate Resilience in Canada Through Planned Retreat’ session drew on three case studies of planned retreat discussions and programs from Surrey, BC; Lake Erie, ON; and Gatineau, QC. The webinar highlights key lessons learned and good practices for future consideration and application. This regionally diverse insight shares issues and engagement opportunities.

This closing session continued after the session time had ended. It was well received and had much engagement in the pre-event promotions. Caring communities: Building resilience in Indigenous communities was moderated and organized by Lily Yumagulova and included leaders that have shown dedication and innovation in increasing DRR in their regions. Whole-of-society understanding is critical to mitigate, prepare, respond, and recover from disasters.

This engaging panel discussion included:

- Traditional Knowledge
- Youth-led hazard mapping
- Firefighting and Lifesaving skills
- Implementation of response plans
- Multi-generational process planning
- Fire & emergency training
- Response
- Innovative work
- Community support
- Youth leadership
- Fire safety

This diverse panel of experts was inspirational, educational, and engaging.

The Presentations

A National Earthquake Early Warning System for Canada

David McCormack, Director, Hazards Information at **Natural Resources Canada**

Earthquake early warning systems are becoming operational in a number of jurisdictions around the globe. As a component of the federal contribution to an Emergency Management System for Canada, Natural Resources Canada is developing a National Earthquake Early Warning (EEW) System for Canada, focussing on areas with both high seismicity and concentrations of population and critical infrastructure. Once operational, the system will provide seconds to minutes warning for strong shaking from large earthquakes in the regions that are covered. Alerts will be distributed to critical infrastructure operators and emergency responders, as well as to the general public through the National Public Alerting System.

The presentation will describe the analysis and modelling of requirements for an EEW system, and the resulting proposed design for the Canadian system. The timelines for program implementation up to 2024 will be described, and certain challenges with respect to system operation and alert dissemination will be discussed.



Alert fatigue – We’ve learned quite a bit from looking at the pain of others. These systems are intrinsically smarter than that. We can target the alerts that will have strong shaking. Not everybody will want the threshold to be at the same pace. A matter of determining where those threshold needs to be set, to hit that sweet spot, they are alerted often enough to know what to do.

People need to remember what to do when they hear that particular sound come in on their phone. All the other downstream information will continue to be there, this will be in addition to that.

Sea Level Rise Doesn't Stop at Municipal Boundaries: The Case for Inter-Jurisdictional Adaption Plans

Robin Hawker, Environmental Planner, Climate Change Adaptation Planning Initiative, Kerr Wood Leidal

John Chapman, Emergency Manager, **NorthShore EM**

Sea level rise is a significant risk for the North Shore area of BC’s Lower Mainland region, which is home to over 180,000 people, the Port of Vancouver, and vast natural and cultural assets. As a local ‘first’ for sea level rise adaptation, three municipalities, as well as the Port of Vancouver, and the Squamish Nation, are partnering to develop coordinated plans to manage flood risks along the entire North Shore coastline.

This presentation will share out on the “North Shore Sea Level Rise Risk Assessment & Adaptive Management Strategy” (draft issued for public review in September 2020), which is founded on the Sendai Framework and sets the direction for ongoing flood risk management partnership.

A key recommendation of the Strategy is the formation of 9 inter-jurisdictional “Comprehensive Adaptation Planning Zones” (CAPZs) for local governments to work together to develop inter-jurisdictional flood management plans at the watershed level. While a regionally coordinated approach can offer many benefits – from cost-sharing, consistent policies, and messaging – it is not without challenges. Navigating differing public and political priorities and community capacity may reveal roadblocks and a need for dialogue and consensus-building.



Communities may realize that they have flood risks and challenges that they have to address. Often there is a capacity issue, there are some tradeoffs, where do you focus your investments and your planning efforts. I think that by bringing these different groups on regional scale provides a community of practice to share information. Working together and joint partnerships can really facilitate a more effective implementation.

New Skills for a VUCA World

Donna Dupont, Chief Strategist, Foresight & Design at **Purple Compass**

The operating environment of the 21st century is increasingly becoming more complex and dynamic, with macro drivers of change creating disruption, causing conditions commonly known as VUCA (volatility, uncertainty, complexity and ambiguity). VUCA is a term that describes a situation of unpredictable change in complex systems, with growing uncertainties. It challenges traditional approaches to management and leadership, which are largely based on linear thinking and a predictive mindset.

The Covid-19 pandemic has clearly shown the systemic, dynamic and interconnected nature of risk. There is growing recognition of the need to shift from linear thinking to a more holistic approach to manage complexity, and the importance of working with uncertainty. These shifts signal the need for new skills and competencies to support the paradigm shift of managing current and future risks and resilience building, as outlined in the Sendai Framework for Disaster Risk Reduction.

This session will introduce the concept VUCA and will briefly cover key skill-sets and methods used to build resilience and thrive in a turbulent environment. This includes the ability to understand and work with volatility and uncertainty using strategic foresight and future scenarios, as well as, complexity and ambiguity with systems-thinking and design-thinking.



Understand that these methods are not meant to replace what we are doing now but are adding a new layer of understanding to the broader environment. About adding new ways of gathering knowledge and intelligence to make informed decisions around strategies moving into the future. Don't be afraid of uncertainty. It can release a lot of new ideas and innovation in DRR.

Supporting Long-term Climate Resilience in Canada Through Planned Retreat

John Sommerville, Natural Resources Canada., Natural Resources Canada

Dr. Brent Doberstein, University of Waterloo

Michael, Barnard and **Dr. Patrick Saunders-Hastings**, Gevity Consulting Inc.,

Natural Resources Canada will share a pre-recorded webinar hosted by the Climate Risk Institute on July 21, 2020. The webinar, titled “Supporting Long-term Climate Resilience in Canada Through Planned Retreat,” presented findings from an environmental scan and current state analysis report of planned retreat in Canada, prepared by Gevity Consulting for Natural Resources Canada. Gevity conducted a comprehensive review of planned retreat in the broader context of climate change adaptation processes, teasing out key themes related to triggers, sources of resistance, barriers, and enablers of retreat. Analyses informed the development of a set of good practices.

Drawing on three case studies of planned retreat discussions and programs from Surrey, BC; Lake Erie, ON; and Gatineau, QC. The webinar highlights key lessons learned and good practices for future consideration and application. Following the webinar, the project team will host a live Q & A.



There is support and help out there, you don't have to do this alone, there is help out there if you need it.

Building Resilience in Indigenous communities

Moderator: **Lily Yumagulova**, Editor of HazNet & Program Director for the Preparing Our Home Program with guests;

- **Casey Gabriel**, Volunteer Fire & Emergency Response team, **Lil'wat Nation**
- **Devin Naveau**, Elected Councillor, **Mattagami First Nation**
- **Michelle Vandevord**, Executive Director for **Saskatchewan First Nation Emergency Management (SFNEM)**

Indigenous communities are faced with a disproportionate risk of disasters and climate change and are at the forefront of adaptation. Organized by the Preparing Our Home program, this session includes three inspiring stories of building community resilience:

- The Xeṭólacw Community School, Lil'wat Nation, developed Canada's first Preparing Our Home community resilience curriculum. Drawing on Traditional Knowledge, this program combines youth-led hazard mapping, firefighting, and lifesaving skills.
- Mattagami First Nation has been working hard to fight back against the changing conditions. With a great team, youth leadership, and hard work, Mattagami has been able to implement a community-wide "Master Emergency Response Plan."
- The Emergency Preparedness in Mi'kmaw Communities in Nova Scotia project focuses on using a holistic approach in determining community strengths, weaknesses and gaps for emergency preparedness, climate change adaptation and health. Youth action can increase community preparedness and lead the way in hopes of establishing lasting community impacts.



Traditional burning has been in our community for as long as we had the fire department. On our lands, we protected our infrastructure like school, water treatment plans, it's really about protection. Have been doing this for a long time. After fire smart, you see your community differently, every house, every structure. I hope this will be implemented more in our First Nation communities.

Often First Nation communities are in a deep state of crisis. These are the communities that you are choosing to plan for the next 7 generations. How do you balance a short-term crisis with immediate needs with long term planning?

One of the most important things in First Nations communities is that they need to be given the opportunity to take the lead. We have systems in place, and everyone just wants to be able to use, and implement those when needed. You are then better equipped to deal with various situations.

Overcrowding leads to more fires and deaths, preparedness is so important.

Not listening or involving our youth in the preparedness planning, we need to do this better. Youth have many solutions. Starting youth council in communities, that voice to other tables, bridging the gap between traditional and western knowledge and coming together with a collaborative approach is the right approach.

Through participation, youth learn about being a part of something big, and a better understanding of what is involved in emergency planning.



RESILIENCE REALIZED

The Ask

It is important to celebrate, acknowledge and showcase resilience realized, in whatever form that may be to you. Show us how you define resilience from a personal, community, or organizational point of view.

We have implemented the first phase of an initiative to identify and celebrate DRR actions being realized across Canada called “Resiliency Realized.”

Our goal is to continue to improve multi-sectoral/interdisciplinary collaboration including Indigenous peoples, NGOs, private sector, regional, provincial, and territorial governments. They were encouraged to contribute to examples of resilience.

A question that continues to motivate debate... How do you define resilience? During the 2020 Virtual CRHNet Symposium and DRR Roundtable we will be working towards collectively building a more resilient Canada through knowledge sharing, collaboration, and thought-provoking and engaging presentations.

It is also important to celebrate, acknowledge and showcase resilience realized, in whatever form that may be. Show us your resilience from your view.

- * Personal: Examples of art, photography, music, poetry, whatever that means to you...
- * Community: Engagement, volunteerism, grassroots initiatives...
- * Organizational: Continuity success, team efforts, operational resilience

While there were dozens of activities on the social media platforms, the results were less than what was hoped for the original in-person event. 33 people joined the Facebook group.