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About CatIQ Connect

It is no question that the frequency and severity of natural and man-made catastrophes in Canada has been on the rise. Annual insured losses in Canada of over \$1 billion dollars are becoming the norm. These catastrophic events, which directly impact the Canadian public, require industry, academia and all levels of government to work together before, during and afterwards. With such a great need to build collaboration and resilience, Catastrophe Indices and Quantification Inc. (CatlQ) has worked to organize a conference to address Canadian Catastrophes.

CatlQ Connect (formerly C4) is a contentdriven forum to foster collaboration before, during and after catastrophic events. This conference will provide an overview of catastrophes, discuss strategies in catastrophe management and explore sector perspectives. Overall themes will focus on preparedness and resiliency, available tools, and impacted stakeholders and policy makers working together for the greater good of all Canadians.

Who Should Attend

CatlQ Connect is built to find common ground and foster collaboration between the following:

- ✓ Insurance/Reinsurance Professionals
- ✓ All Levels of Government
- ✓ Academia/Researchers
- ✓ Risk Managers
- ✓ Other sectors/organizations dealing with resilience from catastrophes

2019 Steering Committee

Jim Abraham

President, ClimAction Services Inc. and CatIQ Connect Emcee

Kris Bagchi

AVP, Reinsurance, TD Insurance

Ron Biggs

National Claims Director, RSA Insurance Group

Teresa Burgess-Ogilvie

Partnership Engagement Committee, IAEM Canada and Manager, Office of Emergency Management, City of Mississauga

Paul Cutbush

SVP, Catastrophe Management, Aon

Jim Eso

SVP, Property and Casualty, Crawford & Company (Canada) Inc.

Dr. Blair Feltmate

Head, Intact Centre on Climate Adaptation, University of Waterloo

Deirdre Laframboise

Senior Manager, Knowledge and Sector Development, Green Municipal Fund, Federation of Canadian Municipalities

Glenn McGillivray

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Director, Disaster Risk Reduction, Canadian Red Cross

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Alexa Reedman

Research Program Coordinator, MEOPAR

Kimberly Roberts

VP and Senior Meteorologist, JLT Re

Dwayne Torrey

Director, Construction & Infrastructure Standards, CSA Group

Laura Twidle

Director, Catastrophic Loss Analysis, CatlQ Inc.

Rebecca Wagner

Associate Director, Meteorological Service of Canada, Environment and Climate Change Canada

Kyle Winston

Co-founder & President, CRU Group Inc.

Interactive Workshop

Come for the workshop, stay for the conference!

Sponsored by WOOD

Hosted by



CANADIENNE DES MUNICIPALITÉS

The Federation of Canadian Municipalities (FCM), led by the Municipal Climate Innovation Program (MCIP), is proud to be hosting this half-day workshop. With over 80% of Canadians living in municipalities, disasters have a major impact on where the majority of us live, work and play. This interactive workshop and Dragons' Den style panel will focus on how municipalities respond in terms of mitigation, emergency response and recovery using real-life case studies shared by MCIP supported municipalities. Participants will then have the opportunity to pitch their solutions to a panel of Dragons.



Facilitated by: Sara Jane O'Neill Policy Advisor, Policy and Public Affairs, Federation of Canadian Municipalities



Opening Remarks by: David Phillips Senior Climatologist, **Environment and Climate Change Canada**

1:00 - 2:30 pm Workshop - Risk Vulnerability, Emergency Response & Recovery



David Chernushenko Urban Renewal Leader



Mike Carr Manager, Saint John Emergency Management Organization



Adam Davey Manager, Emergency Programs, City of Prince George / PG Fire Rescue

2:30 - 3:00 pm Networking Break sponsored by Munich Re

3:00 - 5:00 pm Workshop - Challenges & Pitches to Dragons

Dragons:



Melanie Soler Emergency Management, Canadian Red Cross



Ewa Jackson Managing Director, **ICLEI**



Craig Stewart Federal Affairs,



Nirupama Agrawal Associate Professor, Disaster Risk Management, York University



Leann Hackman-Carty Principal, HackmanCarty & Associates

8:00 - 8:45am Breakfast sponsored by CoreLogic

8:45 - 9:00am Welcome & Acknowledgements and Intro Address



Jim Abraham
CatlQ Connect Emcee and President,
ClimAction Services Inc.



Laura TwidleDirector, Catastrophic Loss Analysis,
CatlQ Inc.

9:00 - 9:15am 2018 CATs in Review



Speaker
Laura Twidle
Director, Catastrophic Loss Analysis,
CatlQ Inc.

The conference will begin with an overview of natural and man-made catastrophes that occurred in 2018. This comprehensive review will include a chronology of events, geographic footprints of impacted areas, related media and insured loss estimates provided by CatlQ.

9:15 - 10:15am Translating Climate Change and Extreme Weather into Practical Application for the Capital Markets

Some elements of the capital markets, such as Property & Casualty insurers, have been well engaged for many years regarding how to incorporate climate change and extreme weather risk into their operations. Recent initiatives, under the direction of The Task Force on Climate Related Financial Disclosures (TCFD) and Canadian Securities Administrators (CSA) Staff Notice 51-354 Report on Climate Change-Related Disclosure Project, have helped bring climate change to the attention of a broader dimension of the capital markets – namely institutional investors, securities commissions, credit rating agencies, mortgage market of banks, and Life & Health. This session will examine next steps that are required to help tangibly translate climate change and extreme weather challenges into the day-to-day workings of each of these sectors of the capital markets, thus building on the positive momentum of the TCFD and CSA 51-354.



Moderator

Dr. Blair Feltmate
Head, Intact Centre on
Climate Adaptation,
University of Waterloo



Panelist Tania Caceres Principal, Risk Nexus



Panelist

Ian McPherson
CEO,
Global RESP Corporation

10:15 - 10:45am Networking Break sponsored by Swiss Re

MORNING CONCURRENT SESSIONS

10:45 - 11:45am Lessons Learned on Hurricanes

An alignment of the atmospheric and oceanic environment, including warmer than normal seasurface temperatures, resulted in 2017 being the costliest hurricane season ever in the USA (in terms of economic damage). The changes in the climate are resulting in warmer oceans, higher sea-levels, and heavier rainfalls. Furthermore, a recent study suggests that hurricanes may be moving slower in a warmer climate, resulting in even higher impacts as storms pass more slowly over populated areas. This session will review the impacts and lessons learned from recent landfalling hurricanes, and discuss changes in future risks, including the threats from these storms to Canada.



Moderator

Jim Abraham

President,

ClimAction Services Inc.



Panelist

Dr. Christopher Melhauser

AVP, Research and Development,

Catastrophe Risk Management,

SCOR



Panelist

Steven Bowen

Director (Meteorologist),

Aon



Panelist

Bob Robichaud

Warning Preparedness Meteorologist,
Environment and Climate Change
Canada

10:45 - 11:45am Nuclear Emergency – Onsite and Offsite

NIAC, the Nuclear Insurance Association of Canada, is a domestic nuclear insurance pool of Canadian P&C insurers and reinsurers. NIAC has developed a multi-faceted Claims Administration System.

The Nuclear Liability and Compensation Act (NLCA), which came into force in January 2017, has broadened heads of damage for eligible claimants and increased operators limits of liability to \$1Billion.

While the Canadian Nuclear Safety Commission (CNSC) regulates and monitors civic nuclear power, it is the responsibility of the nuclear operator to manage emergencies on their site and the provincial government's responsibility to provide emergency response to the public off site. NIAC offers insurance coverage and value-added expertise such as emergency claims response. Collaboratively, these stakeholders provide community resiliency in the unlikely event of a nuclear incident.

NIAC brings the complex world of nuclear to the complex world of insurance by delivering an innovative system for managing low frequency and high severity claims. This session focuses on preparing for and responding to a man-made catastrophic event.



Moderator Colleen DeMerchant General Manager, NIAC



Panelist
Steve Thompson
Department Manager,
Emergency Management,
Bruce Power



Panelist

Dave Nodwell

Deputy Chief, Planning and Program

Development, Office of the Fire

Marshal and Emergency Management,

Government of Ontario

PG 6

11:45 - 1:15pm Lunch and Presentation: The Ostrich Paradox: Why We Underprepare for Disasters

What factors lead individuals not to protect themselves against low-probability high-consequence events until it is too late? The errors that individuals exhibit in deciding not to purchase insurance or invest in loss reduction measures prior to a disaster can be traced to the effects of six decision biases: myopia, amnesia, optimism, inertia, simplification and herding. Two guiding principles for insurance and a behavioral risk audit can assist in designing strategies to encourage property owners in hazard-prone areas to prepare for extreme events. Using concepts from choice architecture coupled with economic incentives, I will propose how the private and public sectors can encourage or require those at risk to protect themselves against future disaster losses.



Keynote Speaker

Howard Kunreuther

Professor and Co-Director of the Risk

Management and Decision Processes Center,
Wharton School, University of Pennsylvania

Sponsored by:



AFTERNOON CONCURRENT SESSIONS

1:30 - 2:30pm Climate Change: From Science to Actionable Insight

Increasingly, the climate change debate is part of the dialogue surrounding catastrophic weather events, including floods, fires and severe weather impacting Canada. This session will bring together experts from the scientific and insurance communities to explore emerging research on how climate change may be impacting extreme weather events, and how the insurance industry is responding to a changing landscape of risk. Our panelists will discuss how we can translate data and research into actionable insight, to continue to build resiliency and recover from weather catastrophes in Canada.



Moderator
Kimberly Roberts
VP and Senior Meteorologist,
ILT Re



Panelist
Pete Dailey
VP, Product Management,
RMS



Panelist

Dr. John Hanesiak

Professor, Department of
Environment and Geography,
University of Manitoba



Panelist

Dr. Adam Fenech

Director,

UPEI Climate Research Lab

1:30 - 2:30pm New Technologies & Techniques

Are you embracing new technology, or will you and your business be left behind in the digital revolution? Today, technology is making it possible for information to be communicated more rapidly and efficiently, and making images, sound and text far clearer and better defined. The question now becomes how do we embrace this change? What steps do we take to guarantee that these new technologies aren't just used as toys and instead become business enablers – saving time and money, enhancing productivity, and ensuring public safety. The objective of this session is to better understand how the adoption of new technologies could impact the public and private response to disaster.



Moderator

Kyle Winston

Co-founder and President,
CRU Group Inc.



Panelist

Ken Macdonald

Executive Director, National

Programs and Business Development,

Meteorological Service of Canada,

Environment and Climate Change Canada



Panelist
Ferdinand Diermanse
Specialist Researcher & Consultant,
Deltares



Panelist

Dr. Lars Dyrud

SVP, Machine Learning, EagleView
Technologies

2:30 - 3:30pm Lessons Learned on Recent Events

Every year municipalities and communities across Canada are faced with extreme and often devastating catastrophes. This distinguished panel will shine a light on how municipalities are preparing and adapting (or not) to recent disasters caused by fire, flood and wind.



Moderator

Deirdre Laframboise

Senior Manager, Knowledge and Sector
Development, Green Municipal Fund,
Federation of Canadian Municipalities



Panelist
Ron Biggs
National Claims Director,
RSA Insurance Group



Panelist

Tamsin Lyle

Principal,

Ebbwater Consulting



Panelist

Jim Rook

Community Emergency Management

Coordinator, Municipality of Killarney

3:30 - 4:00pm Networking Break sponsored by Partners For Action

4:00 - 5:00pm Are Critical Services at Risk and Are They Adapting?

Disruptions to critical services, and the infrastructure that supports them, can significantly impact the health, safety, and wellbeing of Canadians. Coastal erosion, reduction in ice cover, thawing permafrost, and higher temperatures increase risks to transportation, trade, energy, health services, and food and water security. Current systems were designed based on historical data, standards, and codes that do not reflect a changing climate. They were not intended to accommodate the adverse effects of future extreme weather events or slow onset changes amplified by climate change. Costs related to these types of events are increasing and could cost Canada \$21-\$43 billion per year by 2050.

Preparing Canadians for a changing climate and maintaining critical services will require effective emergency planning and infrastructure that can withstand the impacts of climate change. This will be increasingly challenging as extreme weather events escalate and require industry, the not-for-profit sector, academia, and all levels of government to work together.



Moderator
Chad Nelson
Principal Advisor,
Infrastructure Canada



Panelist

Marianne Armstrong

Manager, Climate-Resilient Buildings and
Core Public Infrastructure (CRBCPI),
National Research Council Canada



Panelist
Catherine Blair
Manager, Emergency Preparedness,
Alectra Utilities



Panelist
Scott Davis
Director, International Association of
Emergency Managers - Canada

5:00 - 5:30pm Student Delegate Presentations

5:30 - 6:30pm Opening Cocktail Reception sponsored by Aon

PG 8

Wednesday, February 6



8:00 - 9:00am Breakfast

9:00 - 10:00am Fireside Chat

In this fireside chat, Jason Thistlethwaite and Henk Ovink will discuss Henk Ovink's view on living with water in relation to climate change. Why the need to change our perspective to deal with water in relation to climate change? Which lessons are to be learned in how to prepare cities to cope with these extreme weather conditions? How do the Dutch do this? By joining forces we can prepare for climate change factoring in heavy rainfall, periods of drought and heat, and the impact of potential floods. Climate-proofing requires efforts on the part of a range of public and private parties. Spatial adaptation must become a self-evident component of the physical activities in urban and rural areas. In order to reduce the vulnerability of built-up areas to extreme weather conditions and the impact of a potential flood, climate-proof and water-resilient planning must become a self-evident element in spatial (re) developments, management, and maintenance. When defining objectives for a climate proof city the following questions may arise: weighting the costs and benefits, how often do we find it acceptable that flooding of a street in a neighborhood occurs? And how often is it acceptable in a shopping street where damage risk is higher? What can we do to keep the area from becoming more vulnerable? What do we want to do to make our area more resilient in case of a calamity? Which functions or buildings have to operate at all times? Do we want to prevent cellars from flooding?



Moderated by Jason Thistlethwaite Assistant Professor, School of Environment, Enterprise and Development, University of Waterloo



Sponsored by:



Keynote Speaker
Henk Ovink
Special Envoy for International Water
Affairs of the Kingdom of the Netherlands

10:00 - 10:30am Networking Break

MORNING CONCURRENT SESSIONS

10:30 - 11:30am Risk Communication & Personal Action

How can you act if you don't know? Raising Flood Risk Awareness and Action through Effective Communication

Canadians typically are unaware of their flood risk, and are not preparing through home protection, emergency preparedness, or flood insurance. Information is available through many credible sources, but simply providing information is not enough. Residents want to understand what flood risk means for them, and the efficacy and cost of solutions to reduce this risk. This panel will explore how we can empower Canadians with realistic, solutions-oriented flood risk information to drive action towards personal, home, and community-level resiliency.



Moderator Shawna Peddle Director, Disaster Risk Reduction, Canadian Red Cross



Panelist Carrie Baron Drainage Manager, City of Surrey



Panelist Sandy Davis Program Manager, Flood Risk Awareness, City of Calgary

10:30 - 11:30am Codes & Standards

Codes and standards are building blocks that ensure our structures are sound, our public is protected, and our systems run efficiently. In short, they are a protective shield around you in a very complex world. They are essential to government, industry, and consumers, are effective tools towards achieving predictability and reliability, and can support policy objectives.

As climate change alters how we need to function in the built environment, codes and standards are tools that will help stay ahead of this change, and as industry works to manage risk in this new normal, understanding the role standardized solutions plays has never been more important.

This session outlines the Canadian codes and standards network, how standards and guidelines are developed, and examples of real world solutions being implemented to tackle climate change.



Moderator Glenn McGillivray Managing Director, **ICLR**



Panelist **Dwayne Torrey** Director, Construction & Infrastructure Standards, CSA Group



Panelist Philip Rizcallah Program Director Construction Research Centre, National Research Council



Panelist Barbara Robinson President, Norton Engineering Inc.

PG 10

11:35 - 12:35pm Mortgage Impairment Due to Earthquake Loss in Canada

For several years, insurers have been laser focused on the institutional and systemic challenges that the P&C industry would face following a catastrophic earthquake. Studies have reinforced how a major quake would roll across the insurance sector affecting institutions and their customers. However, little attention has been given to the challenges that such an event would have across the financial sector, and particularly how it might affect mortgage lenders and the banking sector. Our panel will explore the challenges of mortgage lenders in the face of catastrophic risk, and how a more resilient housing and financial sector can be achieved.



Moderator

Paul Kovacs

Executive Director, ICLR



Panelist
Hugo Gomes
Director, Capital Markets,
CMHC



Panelist

Raza Hasan

Chief Risk Officer, Retail Banking & Wealth Management, HSBC

Bank Canada



Panelist

Philipp Wassenberg

President & CEO, Munich

Reinsurance Company of

Canada

12:35 - 2:05pm Lunch and Presentation: Firestorm, How Wildfire Will Shape Our Future

Wildfires are burning bigger, hotter, faster and with increasing intensity thanks in part to climate change and to the fact we have aggressively fought forest fires for more than a century. These mature forests are particularly vulnerable to disease, insects, drought and to the fires that are being triggered by lightning and by an increasing number of people who live, work and recreate in forest environments. This is having a profound impact on fish and wildlife, the water we drink, the air we breathe, industries that operate in forest environments and on residents who live in forest communities. The 2016 Fort McMurray fire ended up being the costliest natural disaster in Canadian history. Only meaningful measures can prevent something like that tragedy from happening again. In this talk, Mr. Struzik will describe what government, industry, First Nations and forest communities can do to address the new wildfire paradigm that is emerging.



Keynote Speaker
Ed Struzik
Author and Photographer,
Island Press

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2:05 - 2:15pm Conference Wrap Up



Jim AbrahamPresident, ClimAction Services Inc. and CatIQ Connect Emcee



Laura TwidleDirector, Catastrophic Loss Analysis,
CatlQ Inc.



February 4-6, 2019

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