

CUPE

Canadian Union of Public Employees

Climate Change

The Impact on Workers

**A Guide for Canadian Union of Public Employees Members in
the BC Region**





Climate change: A Health and Safety issue

Oct 8, 2019

CUPE's Climate Change tool goes online

Jun 28, 2016

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Climate Change Workshop

"Starting to Talk: CUPE Climate Change Conversations" is now accessible online through [cupe.ca](#). CUPE members can now download or view the PowerPoint presentation in the Environment section of [cupe.ca](#) and host conversations about how climate change affects their community and workplace.

The discussion tool also helps CUPE members learn about climate change science and consider actions they can take to cut greenhouse gases that cause climate change.

National environment staff and/or members of the CUPE National Environment Committee can help CUPE locals and members interested in hosting a climate change talk. Contact enviro@cupe.ca for more information.



CUPE National Environment Policy



How to lead a workplace discussion on climate change



How to form a Workplace Environment Committee



Bargaining language for a greener workplace

Participants at CUPE's Health and Safety forum heard from three passionate speakers about the impact climate change has had on the health and safety of workers.

Carla Lipsig-Mumme, a York University professor and founding director of the Centre for Research on Work and Society, spoke about her research on the impact of climate change on Canadians' work environments.



"Climate change is already changing how we work, what we produce, and where we produce it," she said. "However the role of work and workers has been strangely absent from policy and social science research. Labour and environmental movements have yet to effectively address the role of climate change in the world of work."

Patrick Rondeau, advisor for Just Transition at the Fédération des travailleurs et des travailleuses du Québec (FTQ), said that we need to educate our members and engage them in solutions.

Tara Peel, national director for Health, Safety and the Environment at the Canadian Labour Congress, spoke about the connection between workplace health, environmental health and climate change.





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6. Conclusion

This PowerPoint is accompanied by an extensive Guide and a Bulletin containing much more information. Please read all three documents.



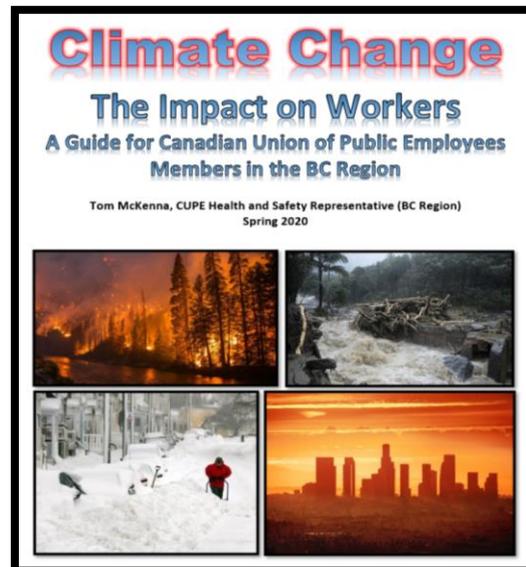
Workers are the *canaries in the coal mine of climate change* as per Roelefs and Wegman (2014):

“Workers’ exposures are greater in frequency, duration, and intensity and, thus, represent the ‘sentinel cases’ that sound the alert to the larger society health effects.”

Roelofs, C. & Wegman, D. (2014). Workers: the Climate Canaries. Retrieved February 03, 2020 from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4167120/>

Introduction

- This PowerPoint is an overview of the Guide on the impact of climate change on workers (and the accompanying Bulletin which summarizes key points from the Guide). This PowerPoint should be used with both of these documents as part of education on the impacts of climate change on workers:



Climate Change – the Impact on Workers in BC Bulletin for Members in CUPE BC Region

Tom McKenna, National Health and Safety Representative BC Region

I. Introduction:

Climate change is an important issue that affects many workers. The purpose of this Bulletin is to summarize key points in the accompanying Guide and Power Point. The Guide reviews a variety of hazards and risks in various Sectors and sample occupations in BC and Canada. The Guide also provides information that may need to be considered in responding to the effects of climate change in the workplace. The direct hazards (including exposures) and risks associated with climate change become more severe and frequent each year. Examples include (excluding indirect impacts such as violence and mental health issues):

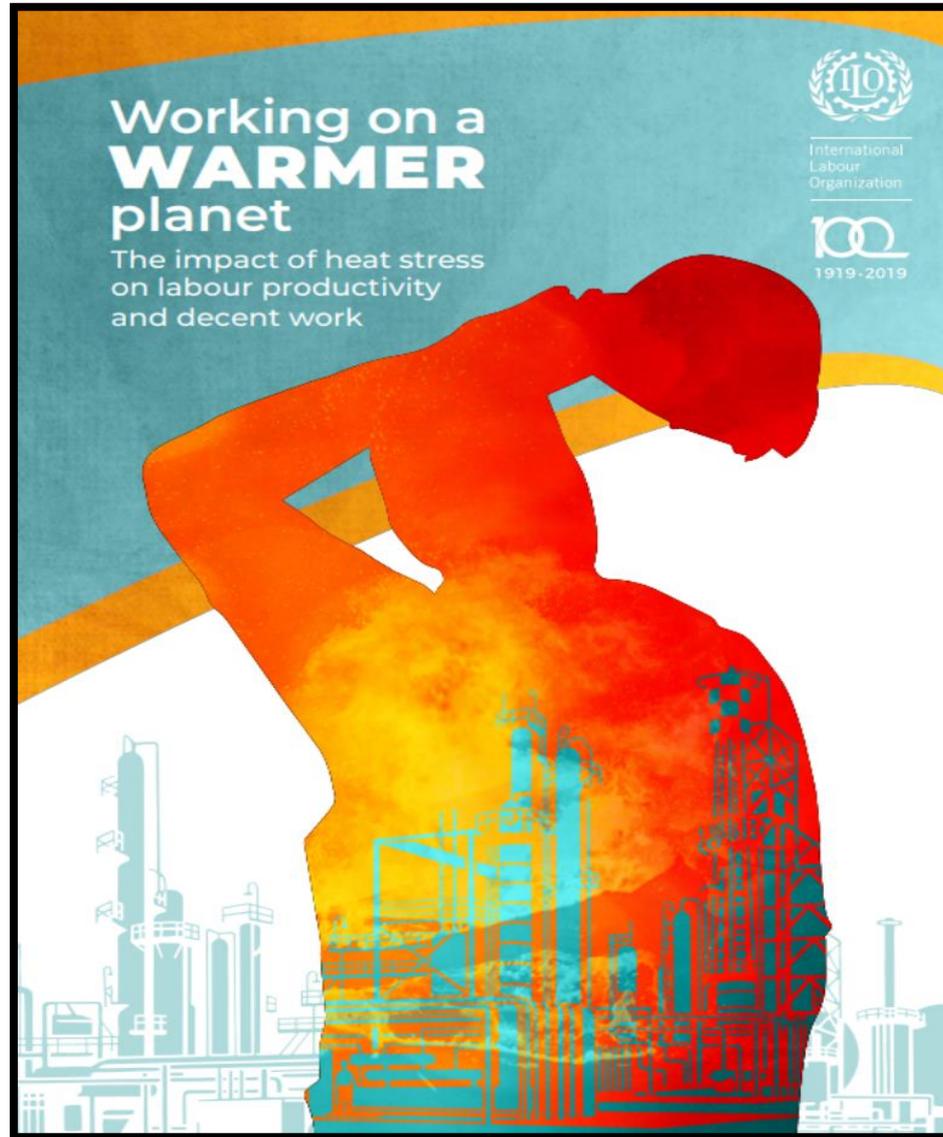
more extreme heat and longer durations of heat events, including humidity	shorter snow and ice cover seasons
less precipitation and droughts	increased precipitation and flooding
less extreme cold in some areas and record cold temperatures in other areas	extreme winds including the frequency of windstorms
forest fires and resulting air quality issues	severe storms and frequency of storms
pathogens	vectors for pathogens

The most common effects of climate change on workers in BC include: extreme temperatures (heat); poor air quality (forest fires, ground level ozone and smog); extreme weather events (storms such as windstorms); and forest fires.

Introduction Cont'd

- Climate change is an important issue that increasingly affects workers in varying ways in many sectors, occupations and equity seeking groups across Canada
- The hazards (including exposures) and risks associated with climate change become more severe and frequent each year e.g. air quality, extreme temperatures (heat), etc.
- There are direct impacts and indirect impacts – both immediate and long term, which can be additive in effect and may have overlapping threat multipliers (the inter-relationship of political, environmental, socio-economic and other factors)

See the International Labour Organization report “Working on a Warmer planet. The impact of heat stress on labour productivity and decent work”.



Introduction Cont'd

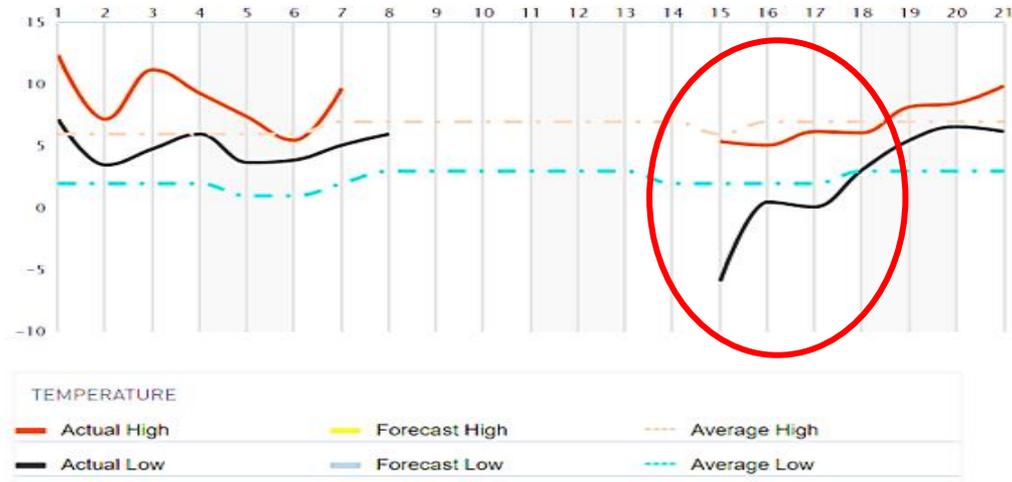
- Climate change can be highly localized in scope, severity and frequency. For example, Vancouver versus Kelowna:

Month	Vancouver	Kelowna
January 2020 Precipitation	256.6 mm versus 158 mm average precipitation (above normal)	23.9 mm versus 31.0 mm normal precipitation (below normal)
January 2020 Temperatures	4.7 Celsius average daily temperature versus 4.3 Celsius for January 2020 (normal)	Minus 5.0 Celsius average daily temperature versus minus 3.3 for January 2020 (warmer than normal)

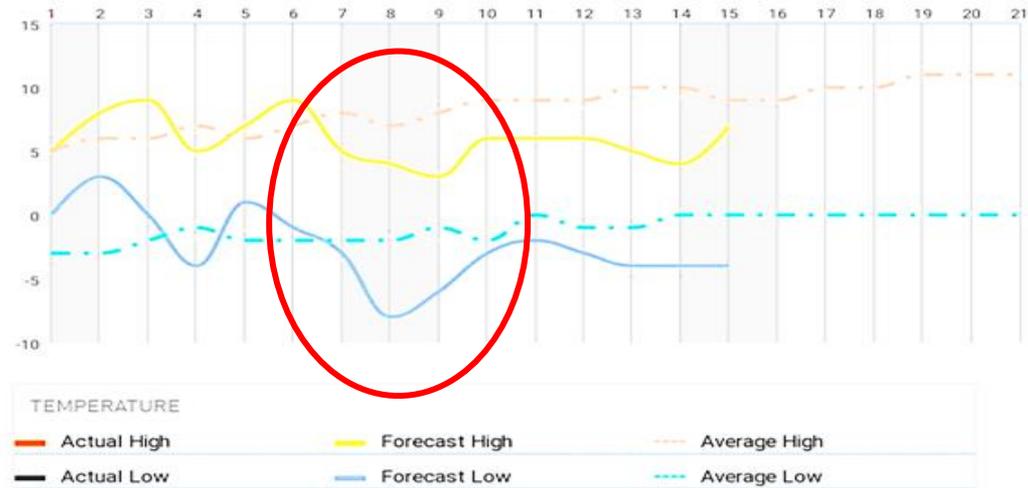
There were also a number of extreme temperatures for both cities despite the averages.

This figure shows that even in months where there may be above average temperatures overall, there can also be periods of higher or lower temperatures. There is a difference between climate change and normal seasonal (or other) variations. In this case, the temperatures were normal variations but the precipitation was not normal as per the previous slide.

Vancouver – January 2020



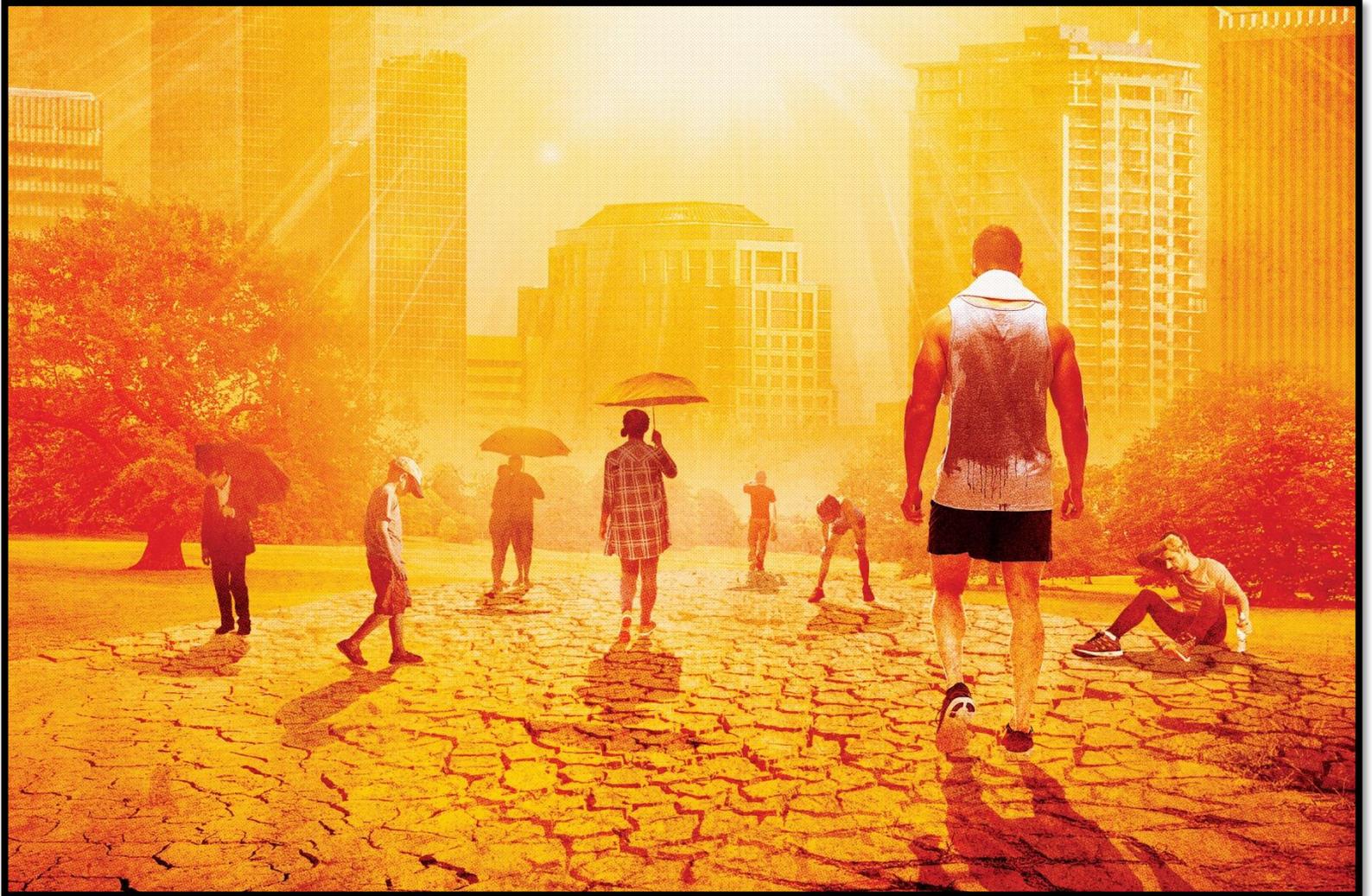
Kelowna – January 2020



Introduction Cont'd

- Employers, Locals and workers must plan how to assess and address the effects of climate change in the workplace





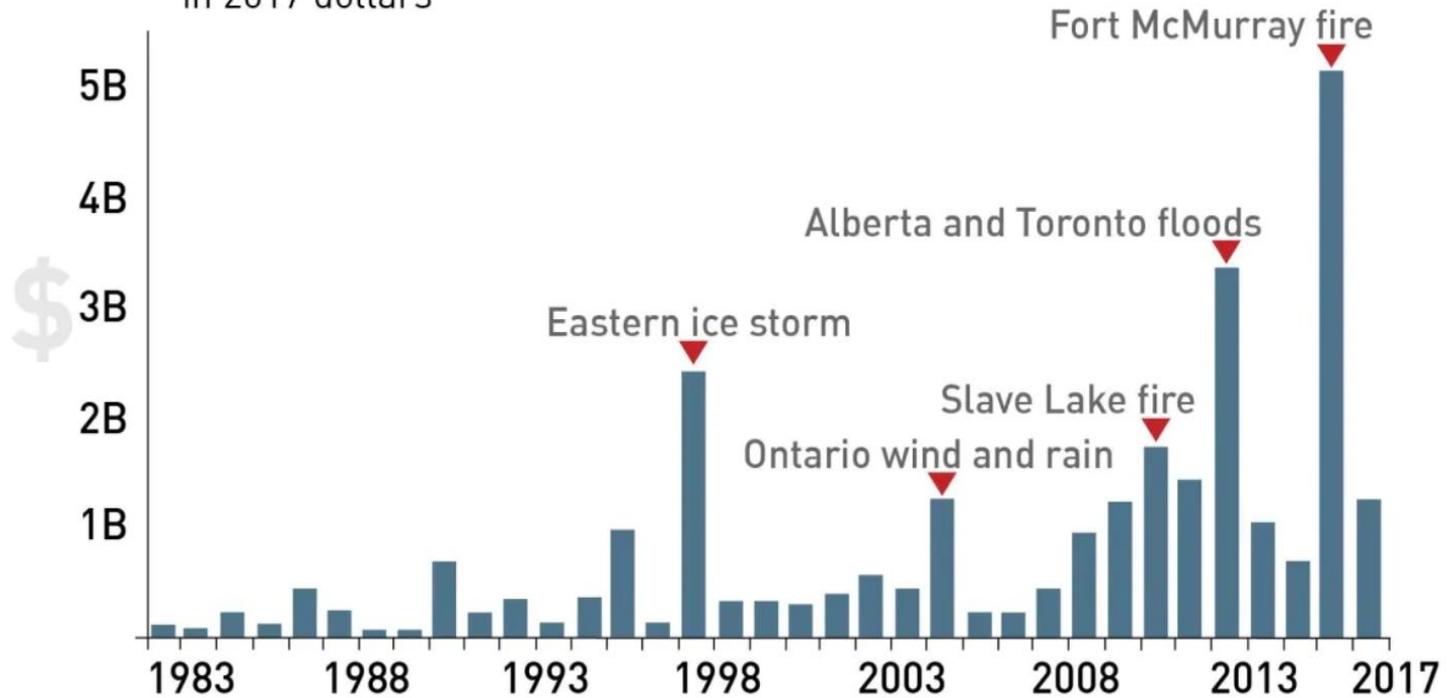


Direct and Indirect Effects of Climate Change

- There are many direct impacts
 - These vary across Canada and within each province
 - These can be short term or long term
 - These can be immediate or cumulative
 - These can be additive in effect
 - These can include threat multipliers
- 

Catastrophic losses in Canada

in 2017 dollars



Source: Insurance Bureau of Canada

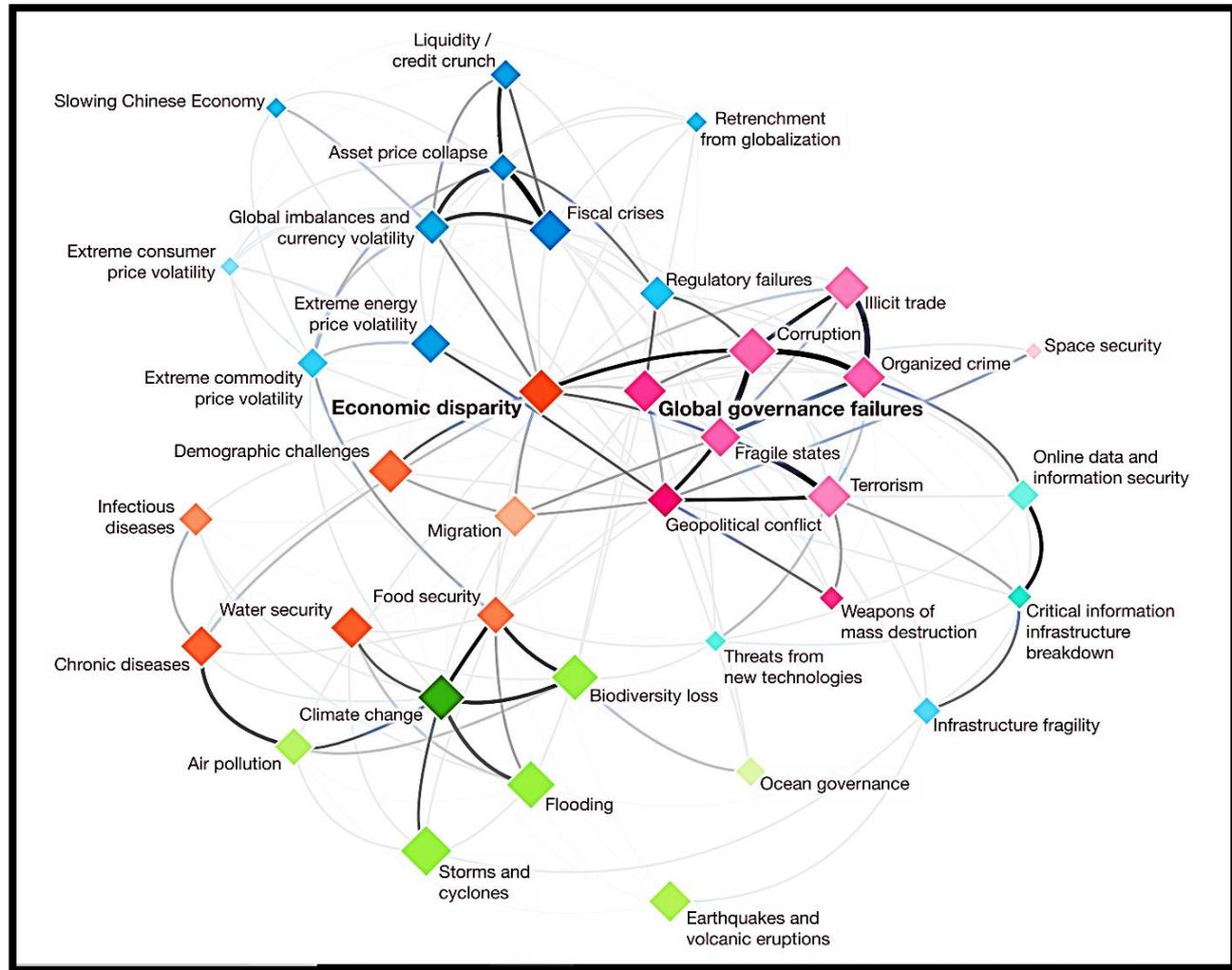
Direct and Indirect Effects of Climate Change Cont'd

- There are many indirect impacts (see Slides 17 and 18)
- These can also vary across Canada and within each province
- These can also be short term or long term, immediate or cumulative, additive in effect and can include threat multipliers

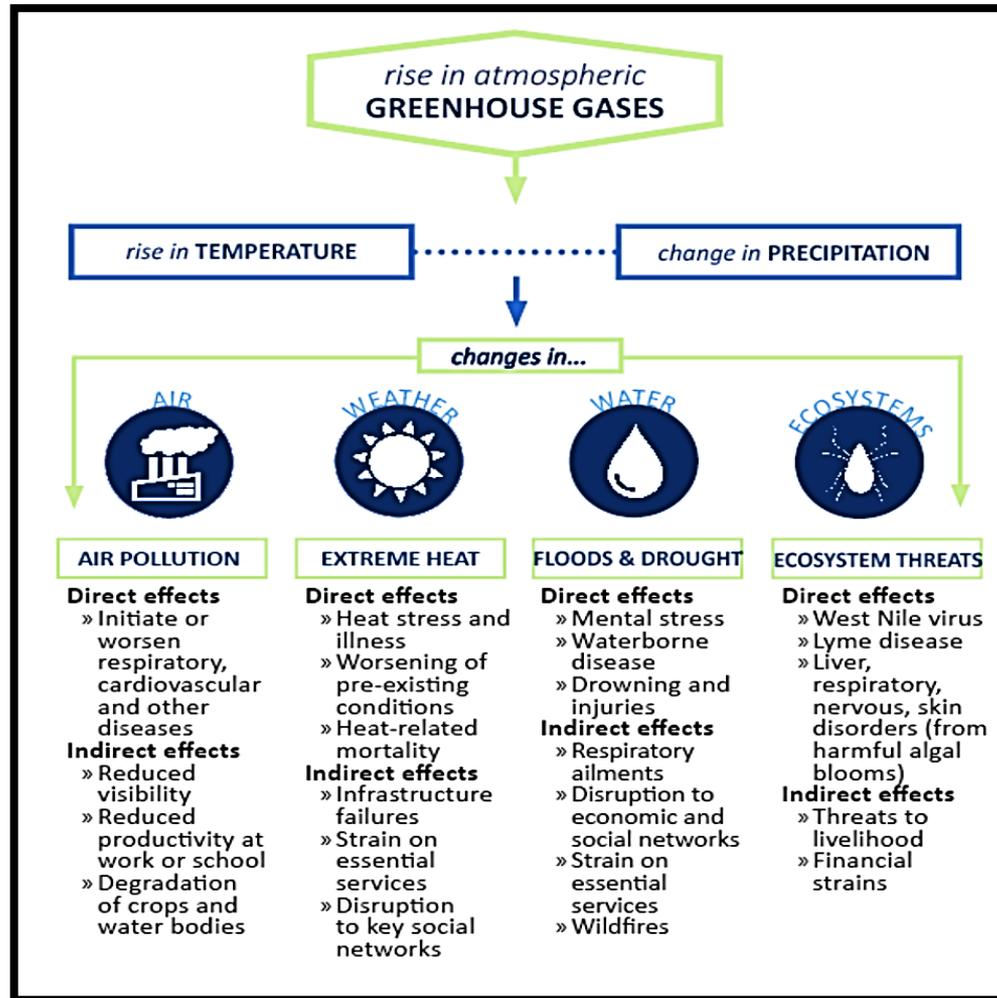


Direct and indirect impacts of climate change on workers and the workplace must always be considered





Sample Risk interconnection map showing the overlap of direct and indirect effects. Global Risks. An initiative of the Risk Response Network. Figure 2. World Economic Forum.



Sample Risk interconnection flow chart showing the overlap of direct and indirect effects. Rise in atmospheric Greenhouse Gases. Minnesota Department of Health.

Extent of the Problem

Extreme heat and longer durations of heat events



Shorter snow and ice cover seasons



Droughts



Flooding



Less extreme cold in some areas and record cold temperatures in other areas



Extreme winds and windstorms



Forest fires and resulting air quality issues

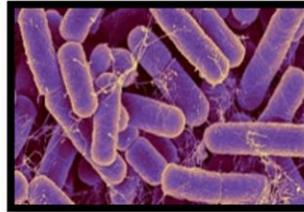


Severe storms and frequency of storms



Extent of the Problem Cont'd

Pathogens



Vectors



Violence



Mental health



These are numerous climate change impacts on workers within Canada as per evidence from many studies and data from various levels of government

Extent of the Problem Cont'd



Within BC, temperature (heat), air quality (forest fires, smog, ozone), extreme storms and forest fires are the primary impacts of climate change **depending on the region**

The impacts of climate change vary greatly by regions within BC and by time of year.

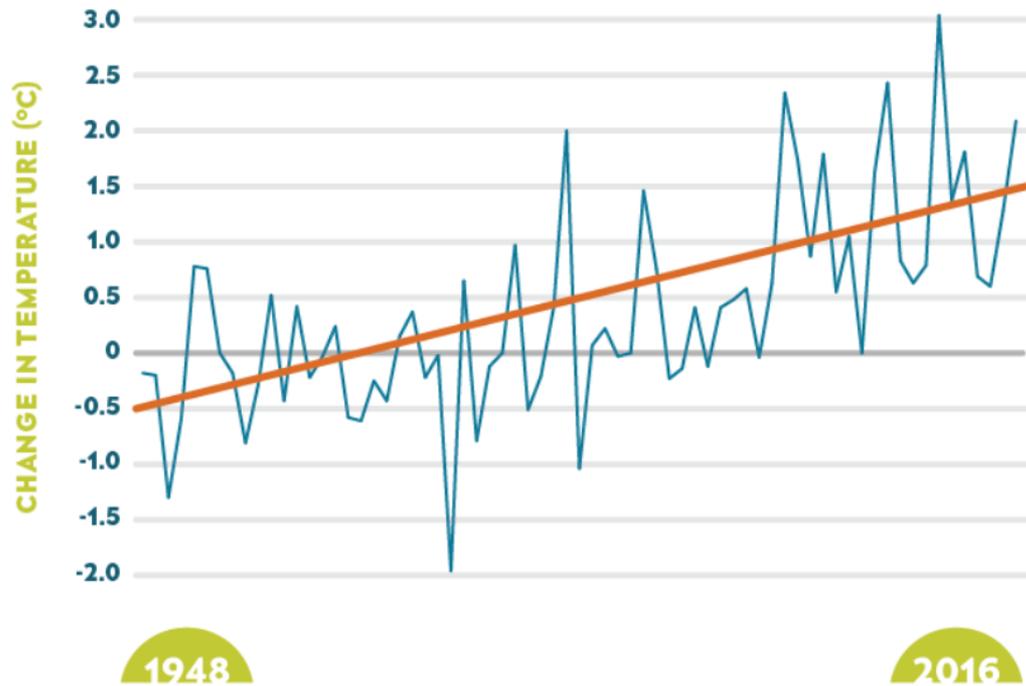
There are consistent province wide effects from climate change





INCREASING TEMPERATURE IN CANADA

Average temperature in Canada has increased by 1.7°C

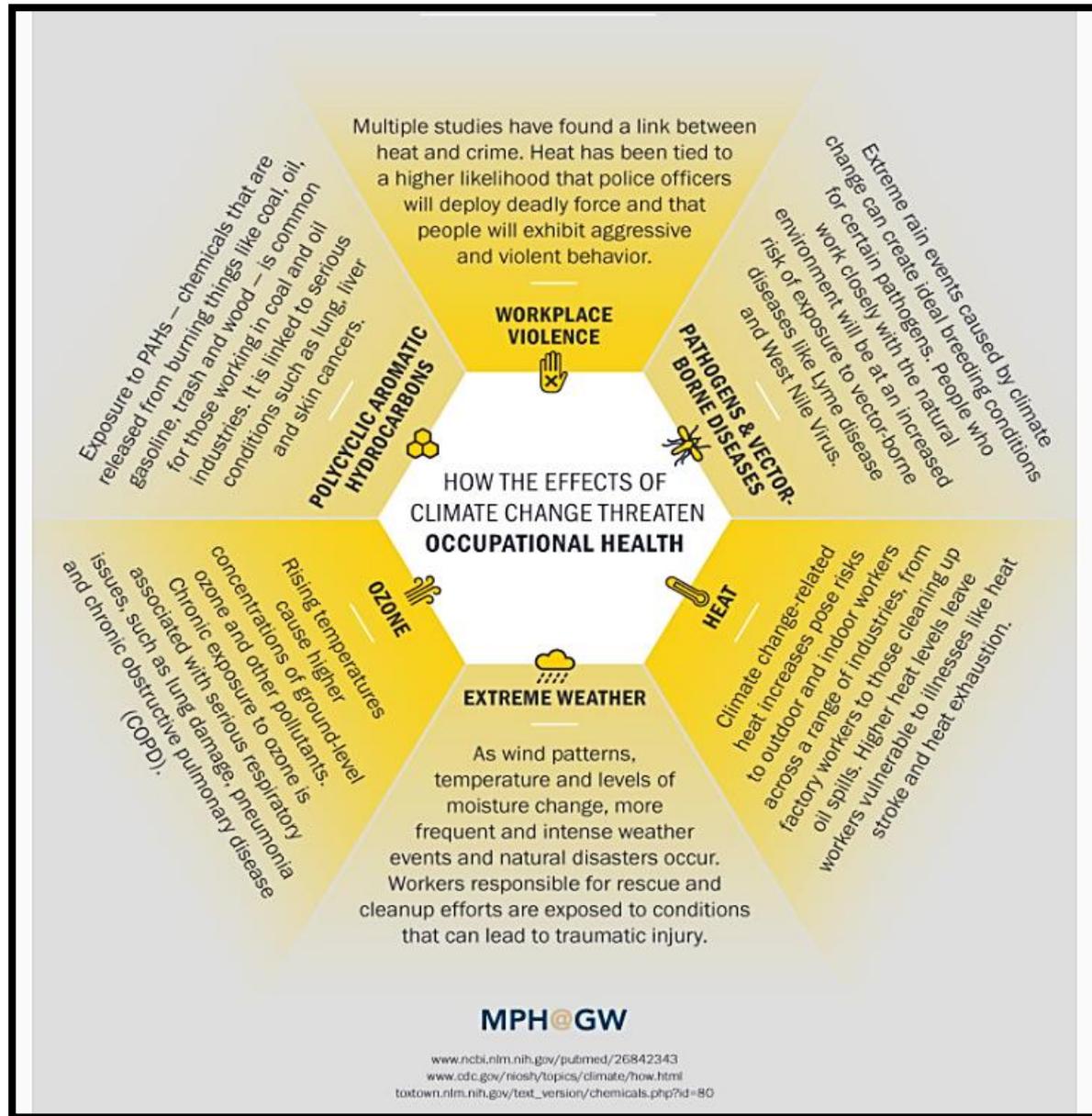




Assessing Impacts on Workers by Sector and Occupation

- As per the CCOHS and CSA Standard Z1002 "Occupational health and safety - Hazard identification and elimination and risk assessment and control":
 - ❑ Identify hazards and risk factors that have the potential to cause harm (hazard identification)
 - ❑ Analyze and evaluate the risk associated with that hazard (risk analysis and risk evaluation)
 - ❑ Determine appropriate ways to eliminate the hazard or control the risk when the hazard cannot be eliminated
- 

**MPH@GW.
National
Institutes of
Health.
“How The
Effects Of
Climate Change
Threaten
Occupational
Health”.**



CUPE has many sectors and occupations that may be impacted by climate change

The Canadian Union of Public Employees is Canada's largest union, with 700,000 members across the country. CUPE represents workers in health care, emergency services, education, early learning and child care, municipalities, social services, libraries, utilities, transportation, airlines and more. We have more than 70 offices across the country, in every province.



Child care sector



Communications sector



Education sector



Emergency and security services sector



Energy sector



Health care sector



Library Sector



Municipal sector



Post-secondary sector



Social services sector



Transportation sector

The sectors and occupations that appear to be impacted by climate change (as per numerous studies) include the following

Paramedics / Emergency Responders

**Municipal
(particularly Outside workers)**

Education / K-12

Energy

Fire Suppression

Transportation

Healthcare

Assessing Impacts on Workers by Sector and Occupation Cont'd

- The following Slide (29) is page 1 of 3 of a sample analysis of the hazards and risks for one occupation in one sector – NOT one job (multiple jobs may exist within an occupation in a sector e.g. a long term care LPN in nursing in the healthcare sector)

(Based on WorkSafeBC claims data, other provincial workers compensation systems data, the Canadian Centre for Occupational Health and Safety, the Institute for Work and Health, Statistics Canada, the National Institutes of Health and the Association of Workers' Compensation Boards of Canada.)

Assessing Impacts on Workers by Sector and Occupation Cont'd

Emergency Responders e.g. Paramedics					
Sample Types and Levels of Hazards and Risks	Hazard and Risk Levels (Likelihood of Occurrence based on studies identified occurrences specifically related to climate change)*				
	Unknown	None	Low	Medium	High
Types of Hazards and Risks					
Air Quality – forest fire smoke, ozone, pollen (note: pollen and mould also have their own categories below), smog, Volatile Organic Compounds					X
Extreme Weather (Highly region dependent) Slips; trips; falls; musculoskeletal disorders, etc due to weather such as ice and snow; vehicular accidents.					
Thunderstorms			X		
Other Types of Storms			X		
Wind, Tornadoes, Turbulence			X		
Precipitation and Flooding				X	
Forest Fires – heat, forest fire smoke, injuries e.g. burns, crush injuries, falls, lacerations, mental health injuries, musculoskeletal injuries, trips			X		

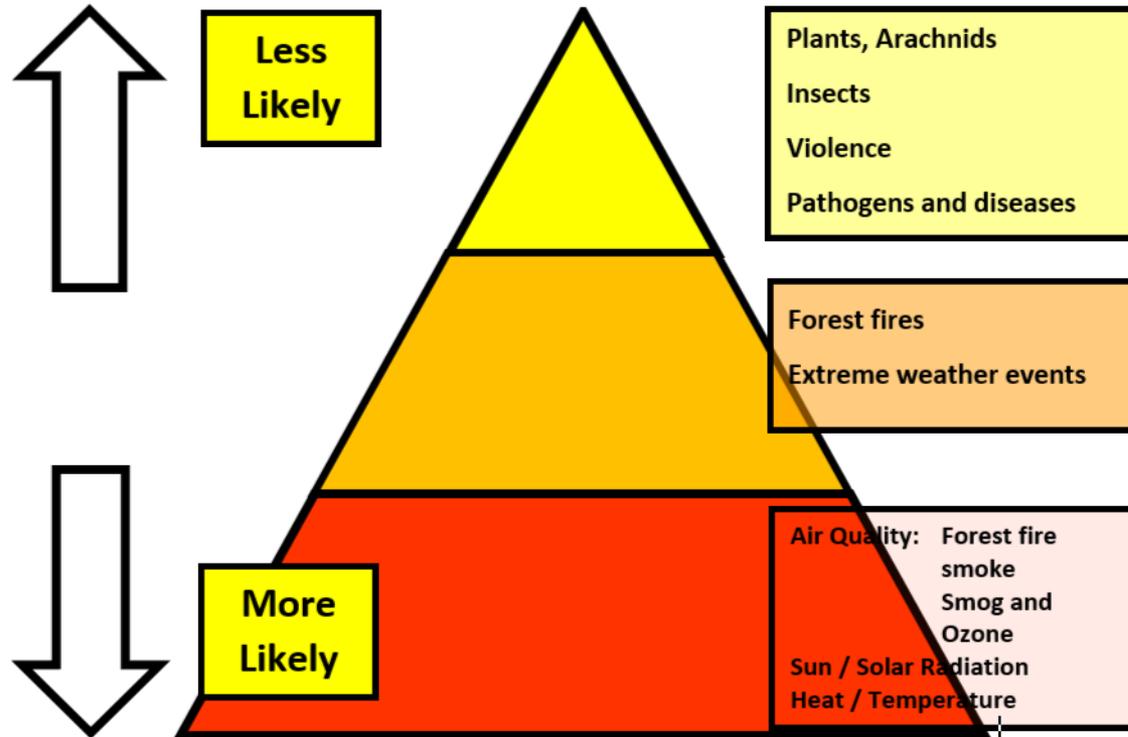
Assessing Impacts on Workers by Sector and Occupation Cont'd

- The following Slide (31) is a sample template for a hazard and risk analysis with a job within an occupation in a sector. It is a precursor to the type of table on Slide 29 above
- It is broken down into multiple categories
- This could be done for each job, if and as required
- For a detailed explanation see the Guide
- Slide 32 is a sample all sector summary (all of BC)

Sample Types and Levels of Hazards and Risks	Hazard and Risk Levels				
Types of Hazards and Risks	Unknown	None	Low	Medium	High
Air Quality – forest fire smoke, ozone, pollen(note: pollen and mould also have their own categories below), smog, Volatile Organic Compounds					
Duration of exposure to hazard					
Types of injuries and diseases that may occur					
Chance / Probability of occurrence of each type of injury or disease					
Hazard and risk controls already in place					
Extreme Weather					
Thunderstorms					
Duration of exposure to hazard					
Types of injuries and diseases that may occur					
Chance / Probability of occurrence of each type of injury or disease					
Hazard and risk controls already in place					
Other Types of Storms					
Duration of exposure to hazard					
Types of injuries and diseases that may occur					
Chance / Probability of occurrence of each type of injury or disease					
Hazard and risk controls already in place					

Page 1 of 5 from sample hazard and risk assessment for climate change risk factors (see Guide for full template)

Likelihood of Climate Change Related Impacts on Workers (BC, All Occupations)



The likelihood of climate change related impacts on workers will change depending on region, sector, occupation, time of year / day, overlap of impacts, pre-existing health conditions, duration of exposure, multiple exposures, etc



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CODES & STANDARDS - PURCHASE

ISO 14090:2019

Adaptation to climate change -- Principles, requirements and guidelines

1 Edition, Published by ISO in 2019, 28 pages

SKU: iso_068507_167700

Sample CSA Group Standard related to climate change.



Occupational Health and Safety Legislation and Regulations and other Sources of Information to Consider

- There are a number of areas of occupational health and safety that need to be considered
- Legislation, regulations and standards, such as (federally, provincially and internationally):
 - ❑ Occupational health and safety (OHS) legislation, regulations, policies and guidelines – provincial and federal
 - ❑ International Organization for Standardization
 - ❑ NIOSH
 - ❑ CSA Group Standards
 - ❑ CCOHS



Occupational Health and Safety Legislation and Regulations and other Sources of Information to Consider Cont'd

- The specific areas of legislation and regulation that may need to be applied include:
 - general conditions
 - health and safety programs
 - due diligence
 - worker orientation
 - the roles and responsibilities of the management representatives, workers, supervisors, contractors, the joint health and safety committee, worker health and safety representatives (this is a partial list. There may be more than one worksite / location)
 - exposure control plans
 - development of general safety procedures
 - personal protective equipment
 - health and safety monitoring systems
 - emergency rescue plan development and implementation
 - incident investigation
 - corrective and preventative actions



All ▾

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CODES & STANDARDS - PURCHASE

CAN/CSA-Z1002-12 (R2017)

Occupational health and safety - Hazard identification and elimination and risk assessment and control

Published by CSA Group in 2012, Reaffirmed in 2017, 92 pages

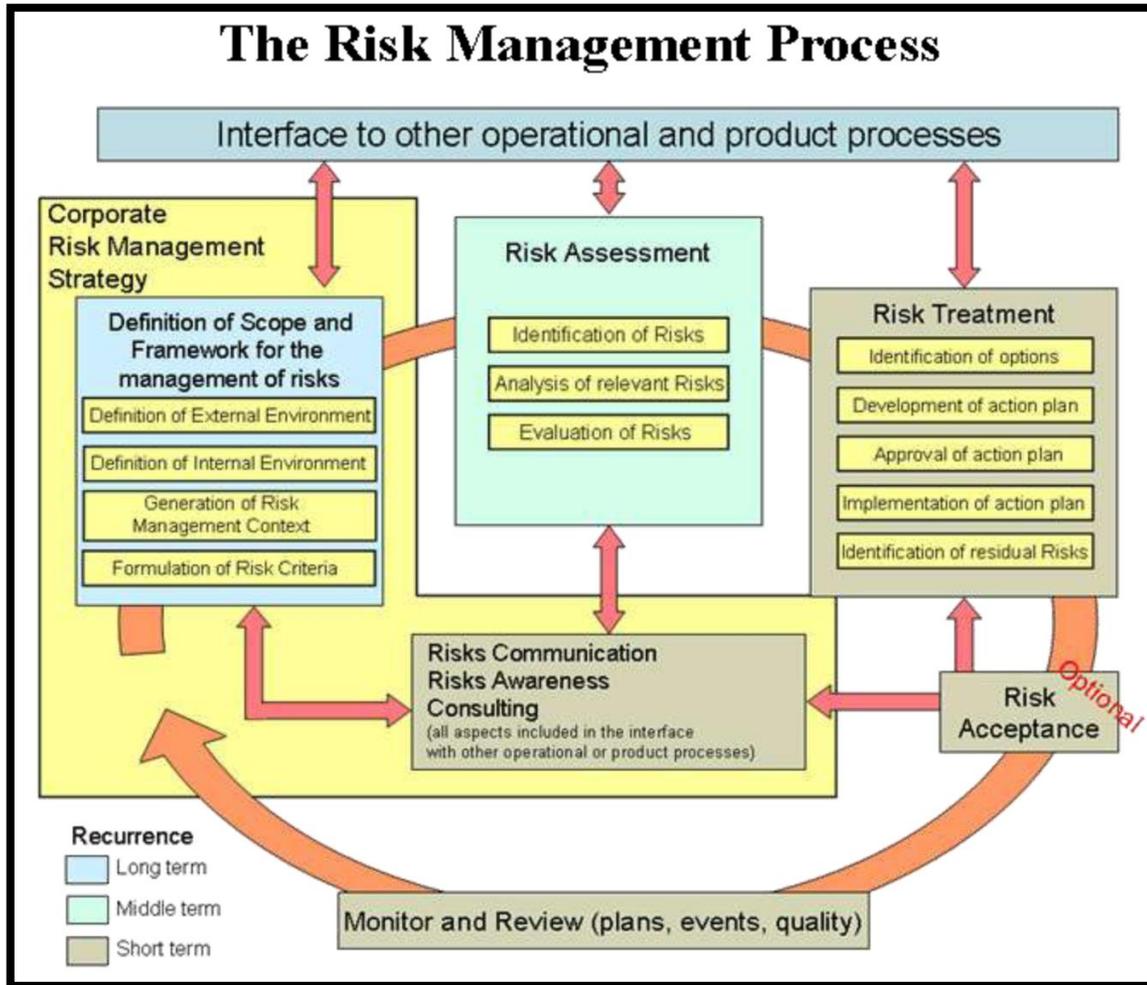
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Sample CSA Group Standard related to hazard and risk assessments.

Occupational Health and Safety Legislation and Regulations and other Sources of Information to Consider Cont'd

- hazard identification and risk assessment
- elimination, management and control of hazards and risks
- right to refuse
- travel / transportation to and from workplace
- training and education
- determining fitness for work
- working alone

The Risk Management Process



Sample Risk Management Process flow chart. While this is for IT systems, it could be adapted / applied to other types of hazards and risks.

Climate change may present different opportunities...



This is not appropriate
Personal Protective
Equipment

Conclusion

- There must be assessment and management of hazards and risks including the following:
 - ❖ Immediate and long term hazards and risks
 - ❖ Direct or indirect hazards and risks
 - ❖ Consider threat multipliers
 - ❖ Consider additive effects
 - ❖ Effects on equity seeking groups
 - ❖ Effects on workers in precarious employment
- Hazard and risk assessment and control is not a one time event
- CUPE, CSA Group and the CCOHS have a number of hazard and risk assessment tools and templates

Conclusion Cont'd

- The workplace must have a health and safety program that includes key elements such as the following (see the resources and templates from CUPE National Health and Safety, CUPE BC Region, CSA Group Standards, CCOHS, etc.). This is a partial list only – see the relevant legislation and regulations:
 - Implementation of a hazard and risk management system that focuses on hazard elimination
 - Full and equal participation of the Joint Health and Safety Committee in all aspects of the health and safety program
 - Ongoing hazard and risk assessments as required
 - Educating workers on all aspects of health and safety



Introduction to Occupational Health and Safety and Joint Health and Safety Committees (“JHSCs”)

Version 3 – Winter 2020

Tom McKenna, National Health and Safety Representative

The information is not legal advice. The materials only address Workers Compensation and Occupational Health and Safety. Nothing in this presentation supersedes the WCB Act, OHS Regulations and Policy. There may also be Collective Agreement rights and obligations. This information is for CUPE use only, cannot be used in any other proceeding and is without prejudice and precedent to any labour relations matter, collective bargaining, grievance, arbitration, and WCB claim or appeal. Each case is subject to the fact pattern and to the changing jurisprudence. This information is subject to frequent changes in law, regulation and policy and will vary by both province and jurisdiction. The current law and policy should be reviewed as they change frequently.



1

See the CUPE Power Point for Joint Health and Safety Committees at:

<https://www.cupe.bc.ca/committee/occupational-health-and-safety-committee/>



There are many other resources available online such as from the Government of Canada CCCR2019 Report.

