Mainstreaming Climate Change Adaptation into Ontario's Emergency Management

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Vison and Mission

Vision: *"A safe, secure and resilient Ontario"*

Mission: "EMO will lead the coordination, development and implementation of prevention, mitigation, preparedness, response and recovery strategies to maximise the safety, security and resiliency of Ontario through effective partnerships with diverse communities"

EMO: what we do

EMO is the overall Provincial emergency management coordinator

Maintains a primary and alternate Provincial Emergency Operations Centre (PEOC)

Main staff in downtown Toronto, 16-20 field staff throughout Ontario

EMO: what we do

4 EMO sections:

Program development (incl. planning & exercises)
Program delivery
Operations and Analysis (incl. Provincial HIRA)
Program Support
(COOP personnel are distributed among the sections)

EMO activities

Support to communities:

Before, during and after emergencies with field staff
Training and workshops
Participation in community exercises
Advice/products for public awareness/education
Hazard identification and risk assessment (HIRA)

EMO activities

Support to provincial ministries

Program development support
Training and workshops
Provincial and Ministry exercises
Coordination of resources during emergencies (e.g., floods, forest fires, pandemics)
Ministry HIRAs

EMO and Ministries

Ministry emergency management programs

Hazard identification and risk assessment (HIRA)
Emergency management coordinator
Emergency management program committee
Emergency operations centre
Annual exercise
Focus on preparedness and response

EMO activities

Response and threat assessment

Linking and coordination of all levels of government, private industry and NGOs during emergencies

Resource procurement and allocation

Proactively monitoring the Province, Canada and the world through a 24/7 Duty Officer at the PEOC

“Pillars” of emergency management

EMO’s 5 pillars are:

PREVENTION
MITIGATION
PREPAREDNESS
RESPONSE
RECOVERY

The “status quo”

Why is climate change adaptation of interest to EMO?

HAZARD IDENTIFICATION AND RISK ASSESSMENT (HIRA)
CRITICAL INFRASTRUCTURE ASSURANCE PROGRAM(CIAP)
DELIVERY OF ADVICE BY FIELD OFFICERS
SEVERE WEATHER PLAN
PANDEMIC PLANNING (WITH MOHLTC)
FOREIGN ANIMAL DISEASES (WITH OMAFRA)

Where would EMO like to go?

Make climate change impacts and adaptations an integral part of emergency management!

For EMO and our stakeholders: Provincial ministries, municipalities and NGO's

Mainstreaming climate change impacts and adaptation into emergency management throughout Ontario.

Mainstreaming?

In the context of adaptation, mainstreaming refers to the integration of adaptation considerations (or climate risks) such that they become part of policies, programs, practices and operations at all levels of decision-making.

The goal is to make the adaptation process a component of existing decision-making and planning frameworks.

Our future vision

Secondary effects that may change the severity or frequency of emergency events:

Health effects due to hot summers and warmer winters
Flood and forest fire events requiring evacuations
Linkages from climate change to disease patterns, e.g. vector-borne and "exotic" diseases
Loss/decline of Northern Ontario permafrost and winter ice cover

Our future vision

Connect the dots!

Several ministries, municipalities and NGO's have on-going programs to address climate change adaptation

These programmes should be ideally co-ordinated in order that duplication of effort is minimized and all possible "gaps" are filled.

The Expert Panel has addressed one such recommendation to EMO, which we are in the process of staffing.

Recommendation 47

The Ministry of Municipal Affairs and Housing in partnership with Emergency Management Ontario should engage municipalities through the Association of Municipalities of Ontario to:

- ensure the transfer of knowledge of on-going climate change impacts to appropriate municipal emergency planning officials to enhance their annual emergency response plan review process and assist in the provision of public hazard education programs;
- to encourage leading municipalities to share risk-based Emergency Response Programs and Plans where issue-specific responses have been developed for climate change-related events, such as flooding and blackouts;
- and encourage municipalities to adopt risk-based land use and emergency response planning.

EMO's Response: we will

1. Work with municipalities on pilot projects to test a draft toolkit; workshop the completed toolkit to municipal officials through EMO field officers, Municipal Services Offices and appropriate associations
2. Develop a risk assessment tool to assist municipalities to complete Hazard Identification and Risk Assessment Plans, as required by legislation, which are more science-based than those currently being prepared

Additional initiatives

Increase understanding and knowledge

EMO and all partners need to further their understanding and awareness of climate change adaptation and mitigation issues

EMO will cooperate with our emergency management partners to facilitate the “mainstreaming” effort.

Our future vision

Include climate change adaptation into HIRA/CIAP

Climate change issues are only indirectly addressed in our hazard identification/risk assessment and critical infrastructure programmes

We intend to address these issues directly by explicitly incorporating the possible primary and secondary effects of climate change

This process will be, of necessity, long-term, ongoing and dynamic

Our future vision

Improve resiliency in Ontario

EMO's mandate includes the goal of disaster-resilient communities, but improving resiliency in the current economic climate is a challenge.

Need to undertake quantitative cost-benefit analyses to determine which adaptation scenarios and mechanisms provide the greatest good.

EMO's specific aims

Develop a strategic planning approach to overall emergency preparedness

Understand the implications of climate change

Recognize the importance of proactive thinking

Encourage dialogue and action between governments, the private sector, academia and the public

EMO's specific aims

Include climate change adaptation into public education, program delivery, planning, operations and analysis

EMO will introduce climate change impact and adaptation thought processes throughout the organization

EMO's specific aims

Base emergency management programs on projected worst case natural events rather than past experience, e.g.

Urban flooding (Toronto, Peterborough)
Urban-rural interface wildfires
Severe weather events
Impacts on Northern Ontario and First Nations

Dynamic risks require long-term programmes to be initiated now.

Local communities

Involvement of local communities and municipalities is vital

Environment Canada survey:

nvironment Canada Ontario HIRA Survey

thanks to EMO for distributing to municipalities!)

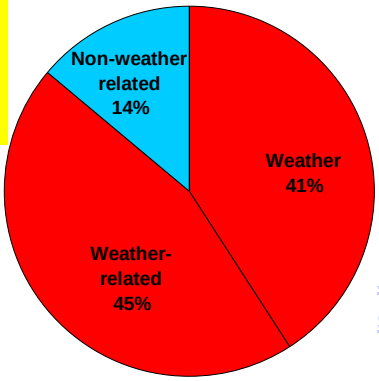
A. Top 10 Hazards

B. Environment Canada's Canadian Atmospheric Hazards Network **(CAHN) website – Ontario** www.hazards.ca

C. Climate Change for Emergency Management Planning

KEY FINDING:
86% of Hazards

Weather & Weather- Related



ALL municipalities identified 1 or more **WEATHER** Hazards in their Top 10

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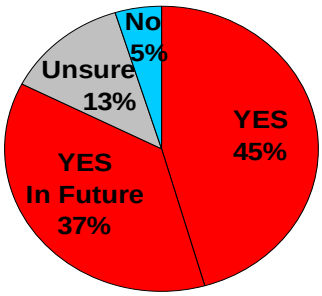
nvironment Canada Ontario HIRA Survey

limate Change and Municipal Risk

Climate Change is Important to Municipal Emergency Management Planners

Climate Change in the HIRA



Municipalities need:

- Climate Trends (current &projected)
- Impacts, Scenarios (www.cccsn.ca)
- Impact Thresholds

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Policy challenges

Planning and public education should not incite fear

Extreme events may result in psychosocial stress; needs to be addressed by (public) health authorities

Consequences of climate change should be integrated across sectors and levels of government

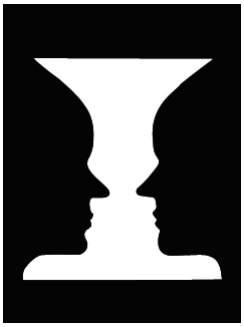
Getting the different levels of government to work together effectively

More Challenges:

Climate change planners and emergency managers have differing event horizons and tend to work in "silos"

Is climate change a "new" hazard or does it just make old and known hazards worse? (tip: John L)

Thinking locally vs globally



My answer to John's #29

I agree with many of his points here.

EMO is attempting to change this "acute" mindset, one meeting, conference, and workshop at a time.

EMO is thinking about chronic issues, underlying problems, and adaptation scenarios.

This is not to say that this is "easy", or that there is no "pushback" from municipal EM's (there is! Lots!) but that is no cause for despair.

The "bottom line"

Climate change impacts and adaptation is not a new endeavor for EMO, rather a change of emphasis to existing endeavors

EMO would assume a supporting role in regard to provincial, regional and local climate change initiatives.

Contact information

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