



CLEAN AIR: INTEGRATING SCIENCE AND POLICY IN THE SOUTHWESTERN ONTARIO AIRSHED

**Presentation by:
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Clean Air Partnership**

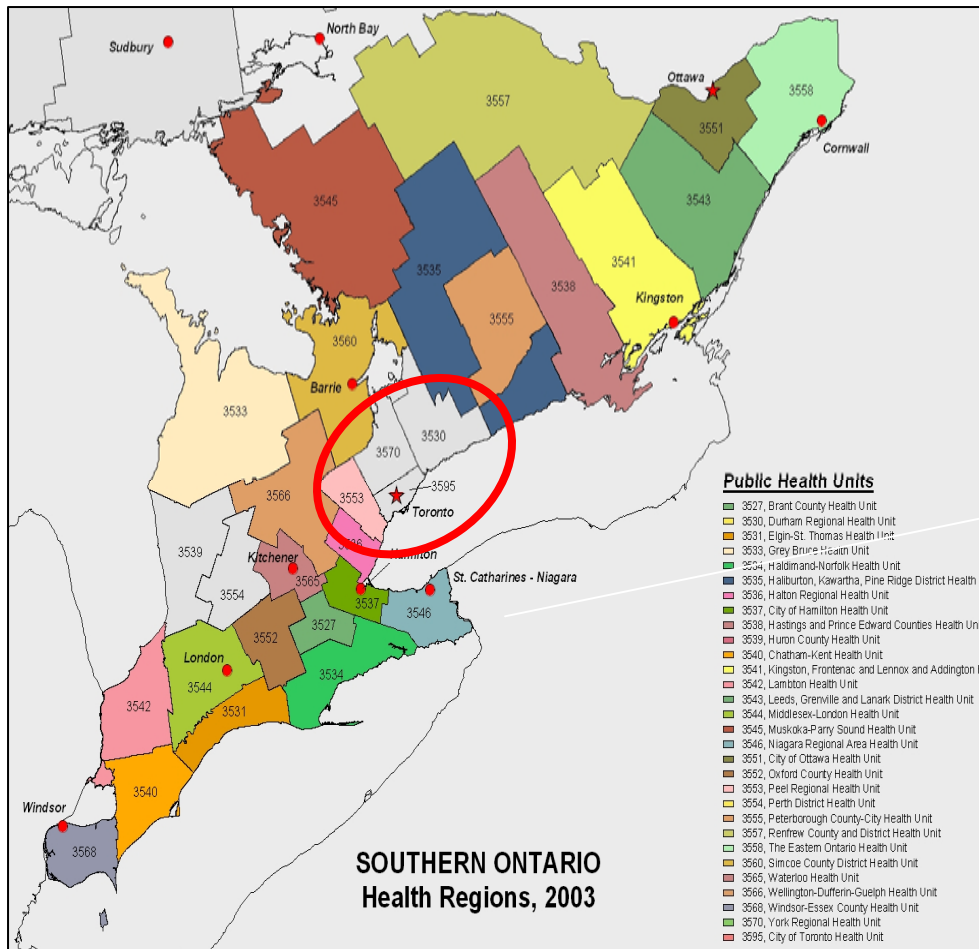
**Southwestern Ontario
March 11, 2009
London, Ontario**

Clean Air Council - Background



- In June 2000 the first Smog Summit was held with Toronto, and the Federal and Provincial governments.
- It was pointed out that action on air pollution had to be on an “Airshed basis.”
- “ Airshed” part of the [atmosphere](#) that behaves in a coherent way with respect to the dispersion of [emissions](#) and for the purpose of management.
- In 2001, 8 municipalities from the GTA Airshed expressed interest and began attending meetings.
- In 2009, 28 municipal governments along with representatives from the Federal and Provincial government continue to meet, plan and act on air quality programs in the GTA.

Engaging Local Governments in the Greater Toronto Area (GTA)



GTA
CleanAir
 COUNCIL

Southwestern Ontario



- We are fortunate to have 3 major municipalities in Southwestern Ontario supporting this meeting and the formation of a regional Clean Air Council.
- Representatives from several other municipalities and local health units are attending today.
- On May 21, the first SWO Clean Air Summit will be held in Woodstock. Local municipalities, representatives from the Federal and Provincial governments will be invited to public launch these efforts.

Interface Between Science and Public Policy

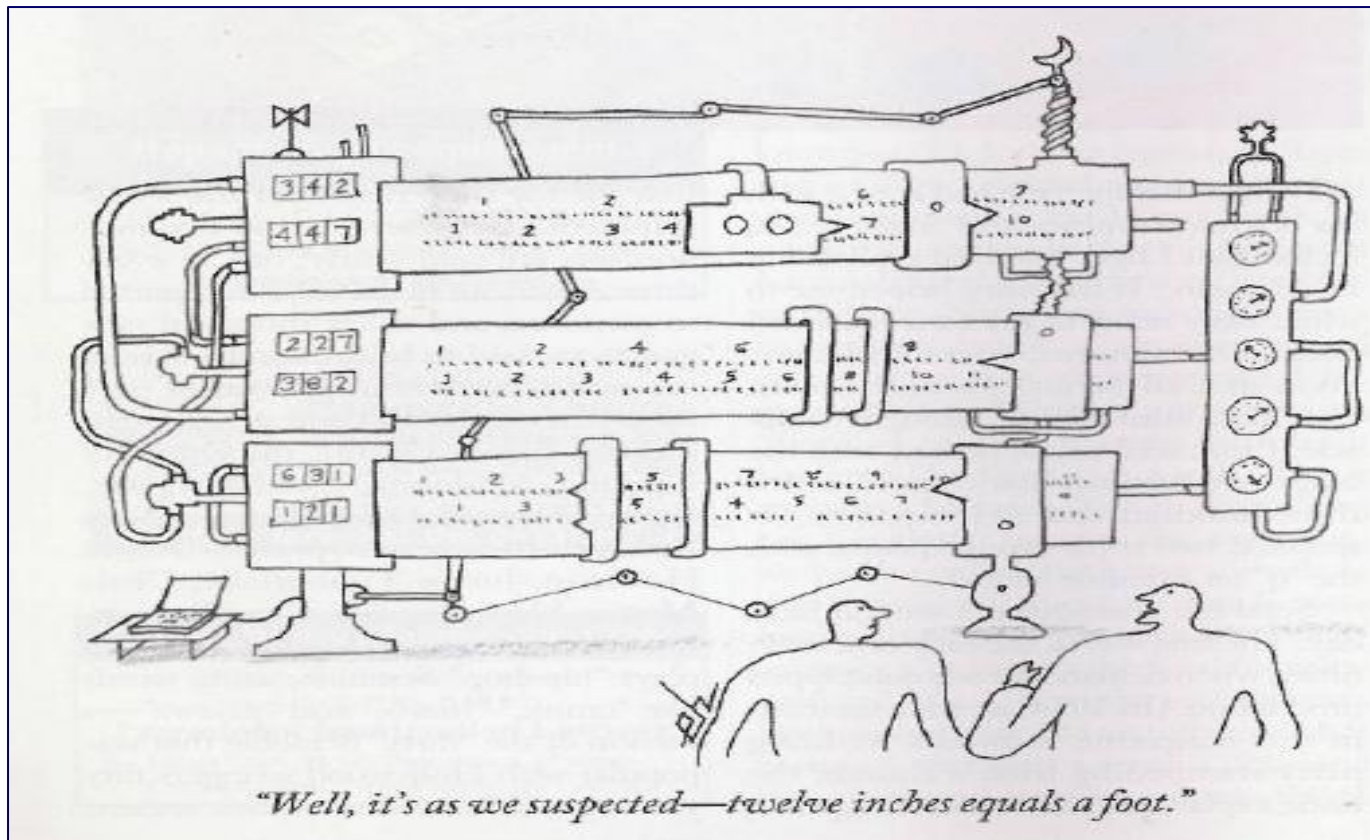


- Air quality improvement operates in the interface between science and public policy.
- The Clean Air Council will have access to applied strategies based on the evolving pure research that is developed elsewhere (i.e. universities, governments, other jurisdictions).
- Aim is to provide ‘off the shelf’ opportunities for local decision makers to use the science in the local policy context.

Avoid Unnecessary Steps



“Well, it’s as we suspected – twelve inches equals a foot.”



Focus on Matters of Local Urgency



Air Quality Issues

- Southwestern Ontario often shows poor AQ levels at many locations.
- Modeling and monitoring can be used for trends and impacts.
- Leading to the integration of air emissions data with both local planning decisions and collaborative strategies.



Climate Change Issues

- Access to the best mitigation alternatives.
- Engagement in Local Adaptation planning.
- Urban Heat Island mitigation.

Engaging Local Agencies and Governments



Southwestern Ontario Air Quality



Unique air quality challenges from distinct economy and geography:

- Highly industrialized parts of region;
- Proximity to emissions sources in the United States;
- Reports have consistently shown that Southwestern Ontario has several 'hot spots' of air quality exposure.

Collaborative Strategies for Solutions: 2002 Smog Alert Response



CAC Current Members (15)	Action Number									
	1	2	3	4	5	6	7	8	9	10
Burlington	✓	✓		✓	✓	✓	✓	✓	✓	✓
Enbridge Consumer Gas	✓	✓	N/A	N/A	N/A	✓	✓	✓	✓	✓
Environment Canada	✓	✓	N/A	N/A	N/A	✓	✓	✓	✓	✓
Halton	✓	✓		✓	✓	✓	✓	✓	✓	✓
Health Canada										
Markham										
Mississauga	✓	✓	✓		✓	✓	✓	✓		
Ontario Ministry of Environment	✓	✓	N/A	N/A	N/A	✓	✓	✓	✓	✓
Oshawa										
Newmarket										
Peel	✓	N/A				✓	✓	✓	✓	✓
Richmond Hill	✓	✓		✓		✓	✓	✓	✓	✓
York	✓	✓		✓	✓	✓	✓	✓	✓	
Toronto	✓	✓		✓		✓	✓	✓	✓	✓
Transport Canada	✓	N/A	N/A	N/A	N/A	✓		✓		
Total	11	9	1	5	4	11	10	11	9	8

Working Collaboratively:

2005 Smog Alert Response



CAC Current Members (15)	Action Number									
	1	2	3	4	5	6	7	8	9	10
Burlington	√	√	√	√	√	√	√	√	√	√
Enbridge Consumer Gas	√	√	N/A	N/A	N/A	√	√	√	√	√
Environment Canada	√	√	N/A	N/A	N/A	√	√	√	√	√
Halton	√	√	√	√	√	√	√	√	√	√
Health Canada	√	√	N/A	N/A	N/A	√	√	√	√	√
Markham	√	√	√	√	√	√	√	√	√	√
Mississauga	√	√	√	√	√	√	√	√	√	√
Ontario Ministry of Environment	√	√	N/A	N/A	N/A	√	√	√	√	√
Oshawa	√	√	√	√	√	√	√	√	√	√
Newmarket	√	√	√	√	√	√	√	√	√	√
Peel	√	N/A	√	√	√	√	√	√	√	√
Richmond Hill	√	√	√	√	√	√	√	√	√	√
York	√	√	√	√	√	√	√	√	√	√
Toronto	√	√	√	√	√	√	√	√	√	√
Transport Canada	√	N/A	N/A	N/A	N/A	√	√	√	√	√
Total	15	13	10	10	10	15	15	15	15	15

Applied Research and Policy Analysis



Community Clean Air Planning

Modeling Air Quality Scenarios
20/20 the Way to Clean Air
Health Reports

Corporate Clean Air Plan

Transit and Active Transportation Policies
Smog Response Plan Review
Decision Tools for Municipal Operations

Green Fleets

Off-Road Equipment
Fleet Emissions calculators
Idling Education/Enforcement

Green Energy

Municipal Opportunities
for Renewable Energy;
Green Energy Act

Green Buildings

Green Doors Open
Policies & Standards
Green Building Skills

Energy Efficiency

Refrigeration & Re-commissioning
EnerGuide and EnergyStar procurement
Lighting- Lightsavers

Climate Change Adaptation

Adapting to Climate Change
Alliance for Resilient cities (ARC)
Heat Alert Program Review

Green Doors Open: Southwestern Ontario



- Georgian Bluffs Township (Owen Sound): [Cobble Beach](#)
- Woodstock: [Oxford County Administration Building](#)
- Cambridge: [Region of Waterloo Emergency Medical Services Headquarters and Fleet Centre](#)
- London: [Sisters of St. Joseph New Residence](#)
- Windsor: [St. Christopher Catholic Elementary School](#)
- Chatham: [Villa Angela](#)
- Waterloo Region ([St. Clemens](#)) [YMCA Camp Ki-wa-y Earth Residence](#)

<http://www.cleanairpartnership.org/greendoorsopen/>

Villa Angela



Green Features

- Site features erosion and sediment controls, native or adaptive vegetation on more than 50% of the site.
- Ground source heating and cooling.
- HFC refrigerants.
- Enviroshake shingles with a 50-year warranty and made of 98% recycled tires, industrial plastic and fiber.

Social Marketing



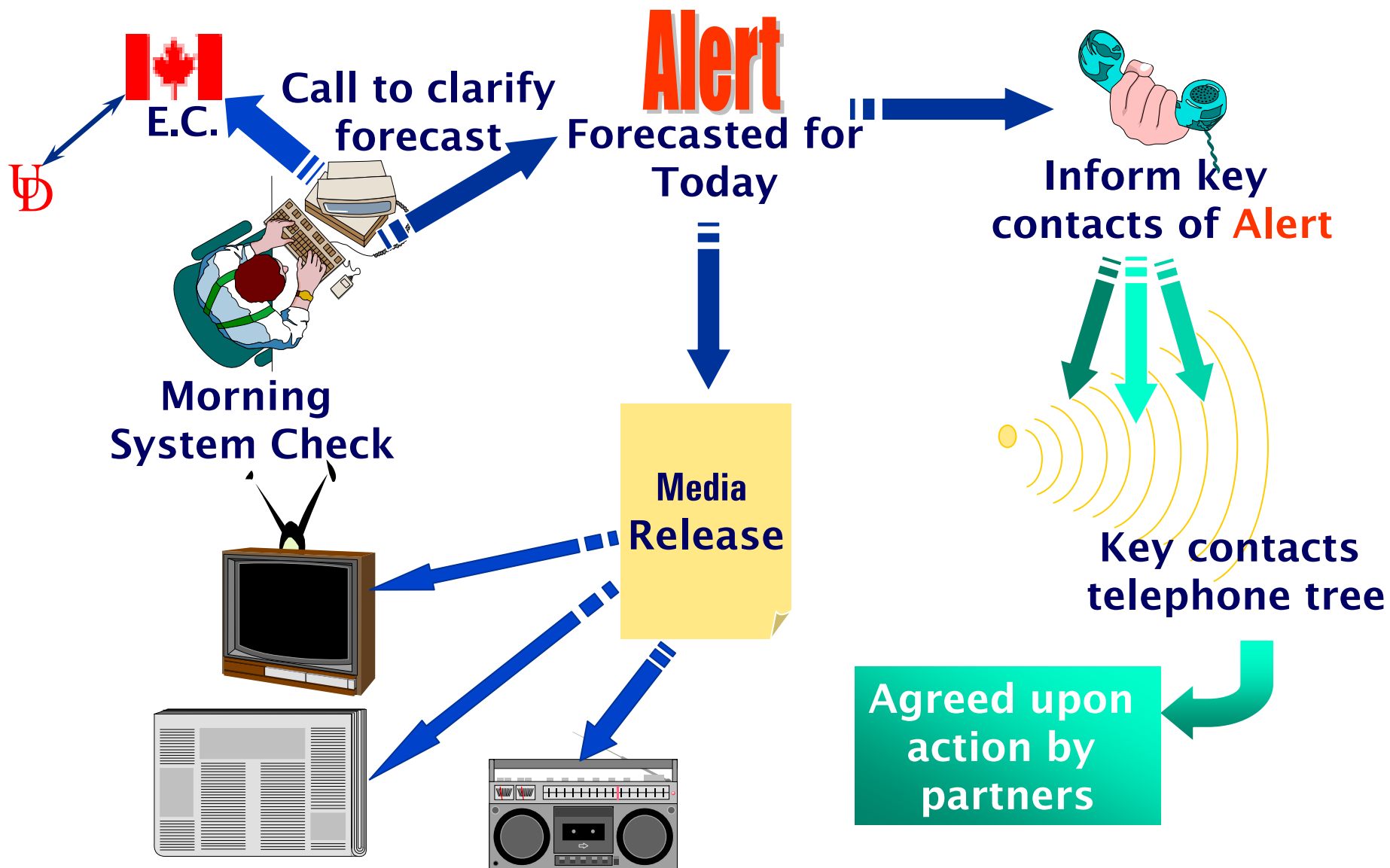
- 20/20 The Way to Clean Air
- Coordinated by CAP in partnership with Public Health Units, which facilitates public awareness and involvement by individuals, schools, workplaces and community.

CUTTING ENERGY USE ON THE ROAD BY 20% – tips to get you started
For better health and a cleaner environment.

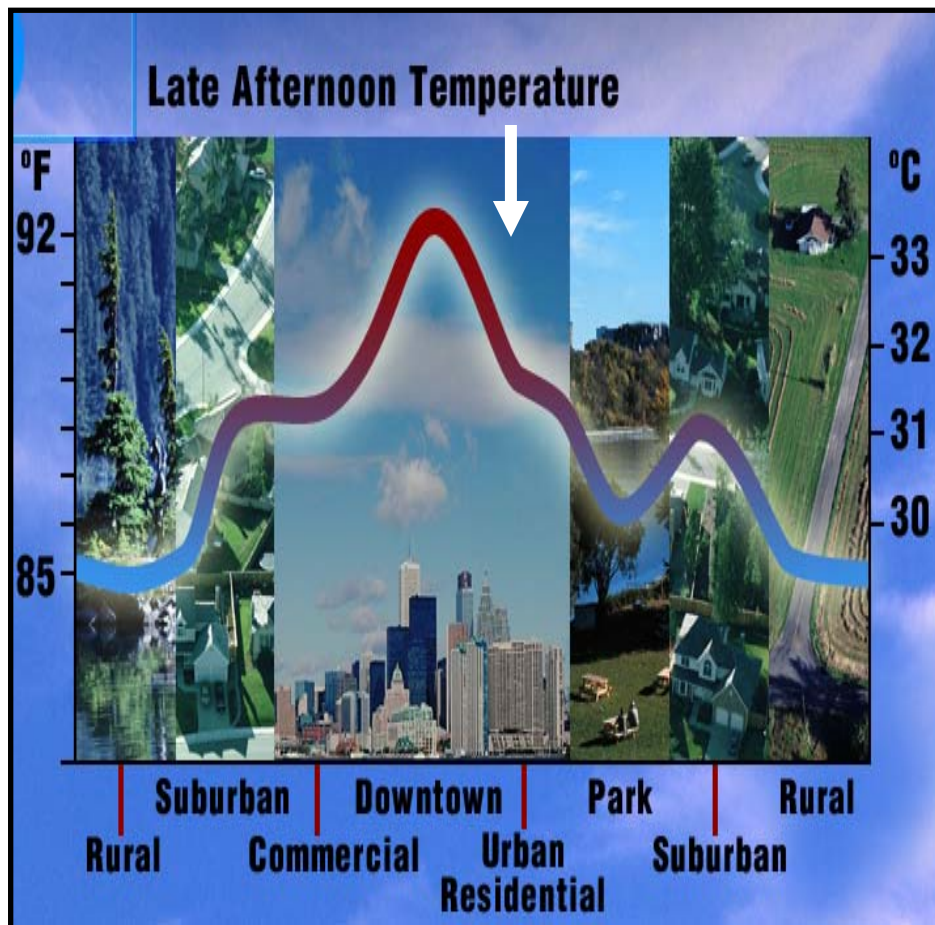


<http://www.cleanairpartnership.org/2020/>

Public Outreach: Heat Health Response Planning



Using the Science to Suggest Solutions



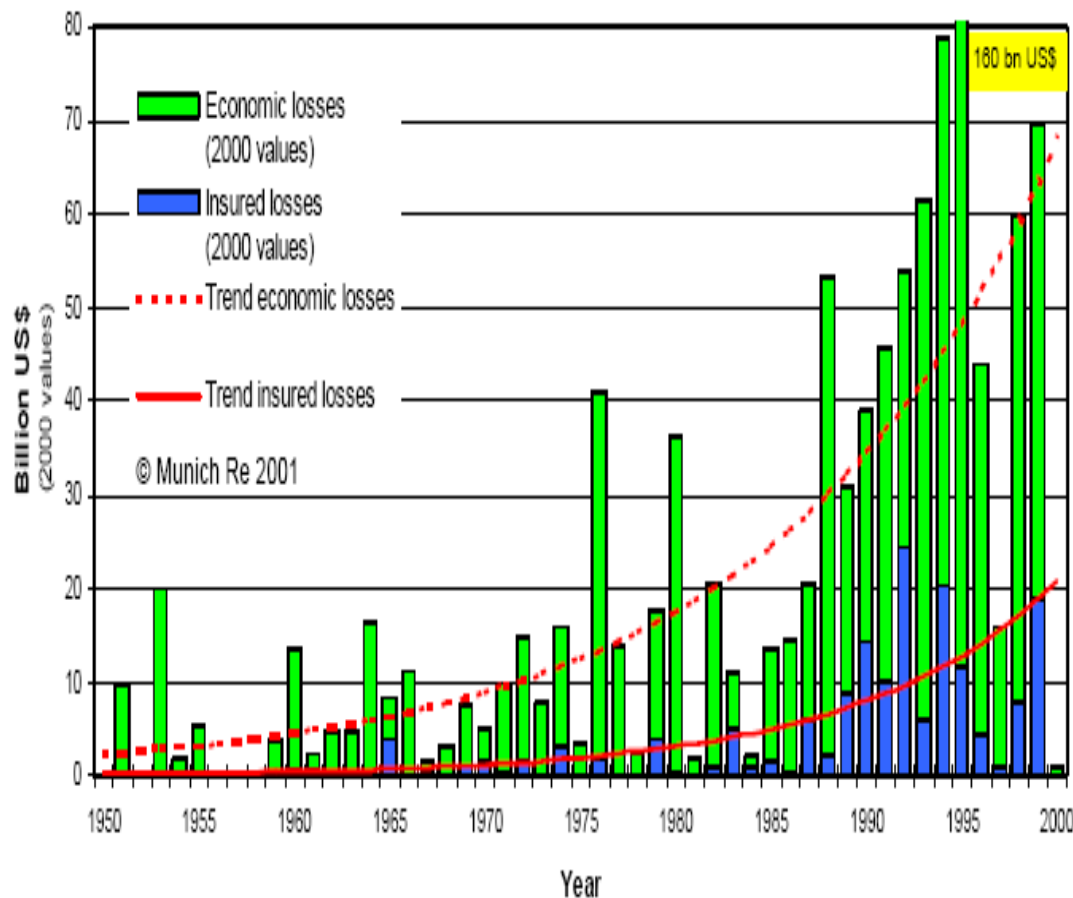
Urban Heat Island

- Spatial and temporal distribution 'hot'/'cool' spots.
- Relationship between thermal variation and urban development.
- Local capacity to respond?

Climate Change Adaptation Deficits?



Insured and Uninsured Losses

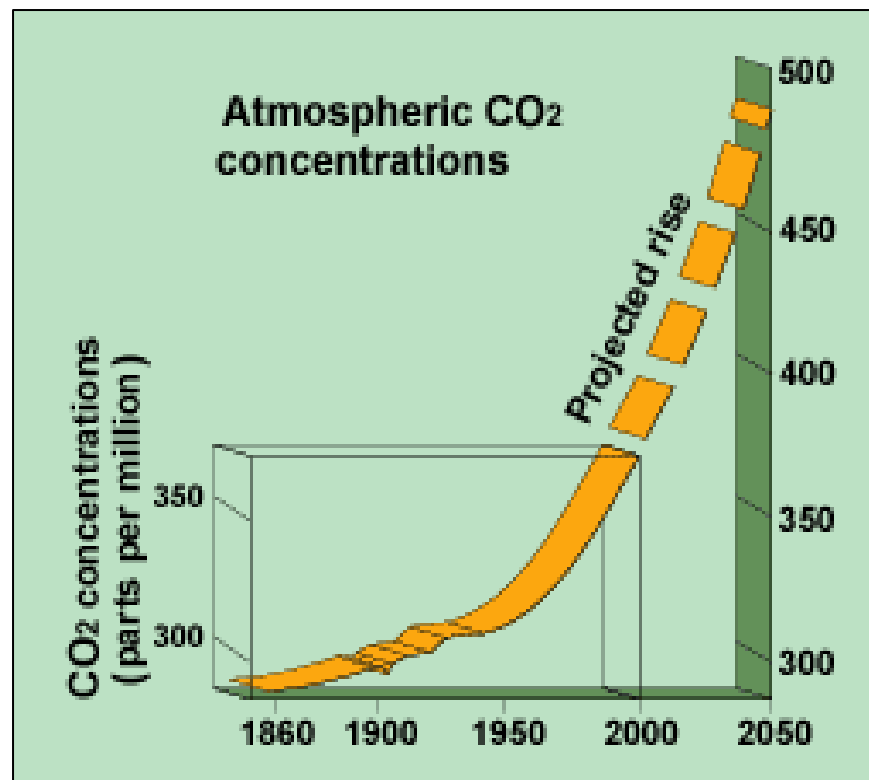


- Global Costs of Great Natural Disasters (1950 – 2000) in US\$
- Billions including economic and insured losses
- Great natural disasters defined as >100 deaths or >US\$100M in claims

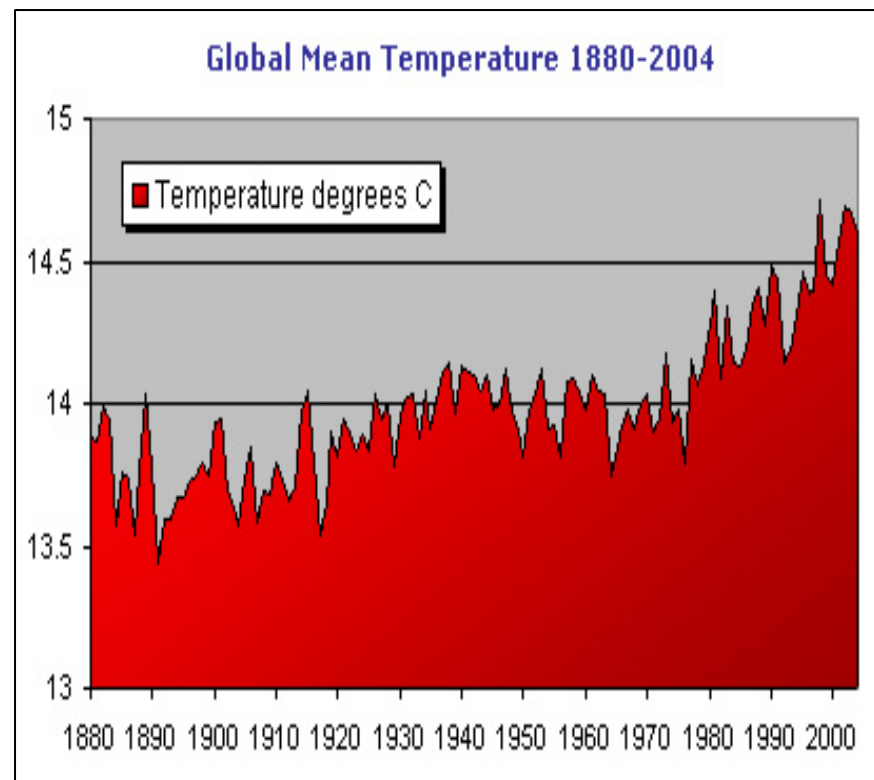
Building Knowledge Health of Impacts



Increase in allergies and asthma (elevated CO₂)



Premature deaths, illness and violence (heat waves)



Range of Responses for the Road Ahead



- Bear the loss (ex. Liability)
- Prevent the effects (ex. Ice removal)
- Modify the events (ex. salt/sand)
- Change behaviour (ex. Warnings)
- Research (ex. Science and technology)
- Education & outreach

Conclusion: Partnerships for Impact



- Applied research brings the science to the policy makers in order to facilitate improvement in air quality, GHG reductions and build urban resilience.
- Supported with social marketing to maintain local focus.
- Highlight best practices from jurisdictions across Southern Ontario and on both sides of the border.
- Bring together senior government with municipal government leaders in the Southwestern Ontario.
- Communities of Practice foster local networks in the region, to collaborate to reduce emissions within shared air shed.



THANK YOU!

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