Lessons Learned from Health Canada on Building Resiliency to Extreme Heat

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Purpose

To provide a summary of Health Canada's Heat Resiliency Initiative and share some key lessons learned.

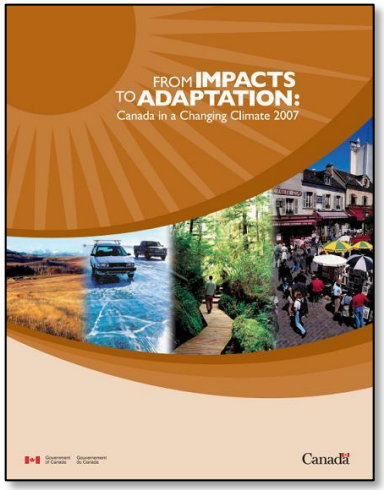
1. Why is heat a health risk in Canada?

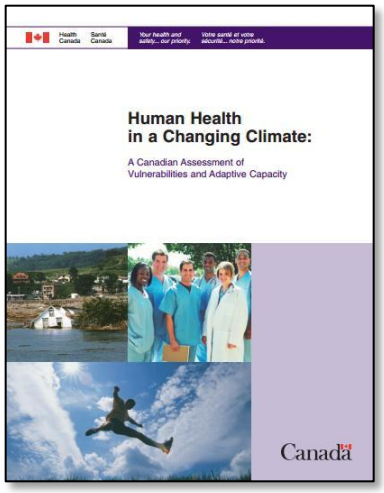
2. How is Health Canada building heat resiliency among individuals and communities in Canada?

3. Examples of identified needs and gaps to enhance resiliency

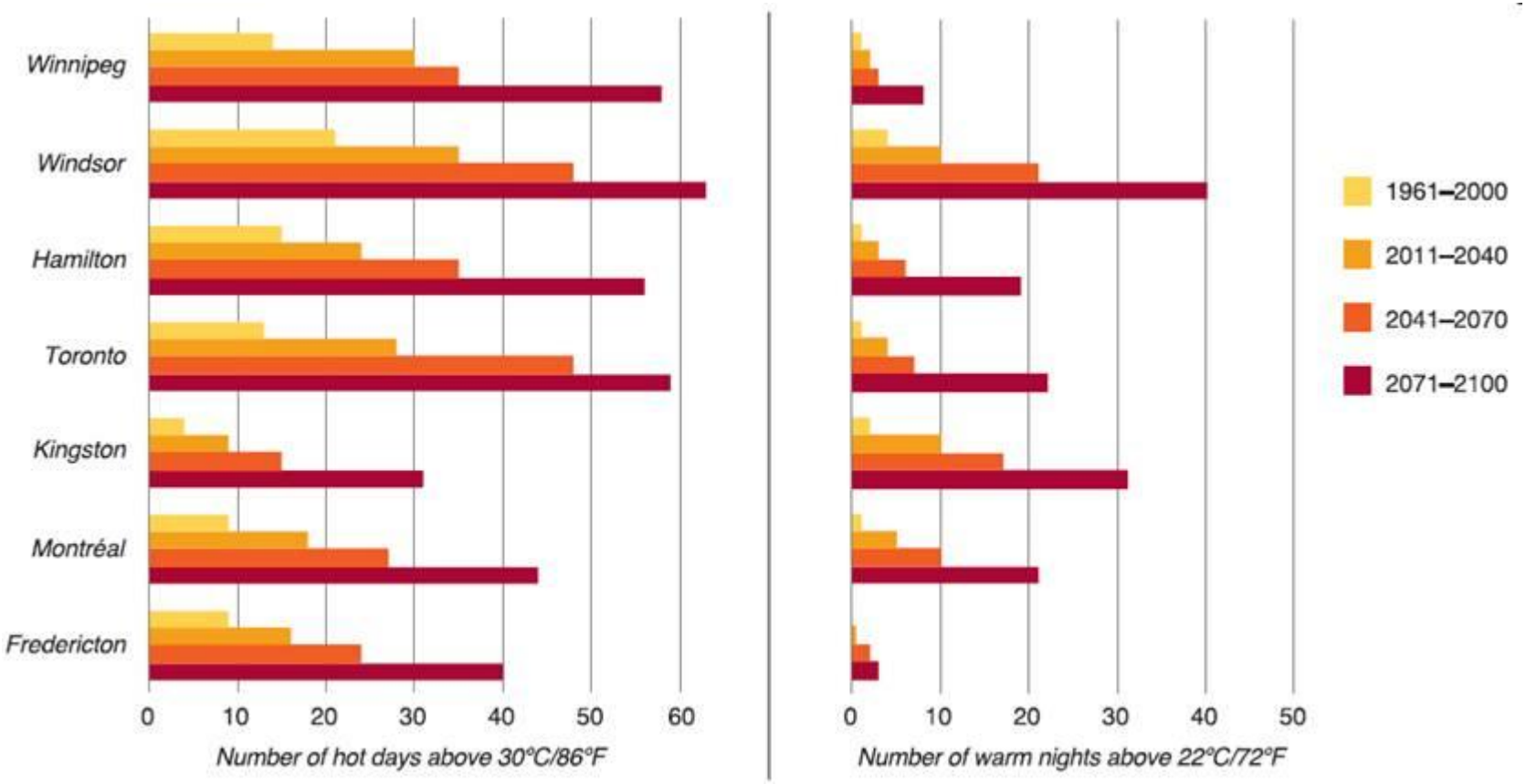
Heat is a Health Risk in Canada

- In 2007, Natural Resources Canada published a comprehensive assessment of climate change impacts and adaptation options in Canada.
- In 2008, Health Canada published an assessment report of human health impacts from a changing climate. The report identified a range of health vulnerabilities and impacts from a changing climate and actions to increase resiliency.
- The two reports identified extreme heat as a significant weather related hazard with important risks to human health. These two reports were drivers for Health Canada's Heat Resiliency Initiative.
- An update to the Natural Resources Canada assessment report, including a health chapter, is expected to be completed in early 2014.





Number of Extreme Heat Days Projected to Increase



Source: Casati, B. and Yagouti, A. (In Press).[23]

Federal Government's Role in Adaptation

1. Generating and sharing knowledge.

2. Building capacity and helping Canadians take action.

3. Considering climate change into the mainstream of decision-making

Health Canada's Heat Resiliency Initiative

In 2008, HC received $7.9M over three years to enhance resiliency to extreme heat in individuals and communities.

In 2011, HC's Heat Resiliency Initiative was renewed for $8.5M over five years.

1. **Heat-Health Science:** address critical knowledge gaps.
2. **Clinical training:** enable health professionals to better advise, diagnose and treat their clients.
3. **Expand Heat Alert and Response Systems (HARS):** develop and test alert systems and assess vulnerability.
4. **Heat-health messaging:** help to promote awareness and support personal adaptation.
5. **Partnerships and networks**: support information sharing on adaptation.

Data Needs and Gaps: Example 1

Harmonisation of Heat Alert and Response Protocols in Ontario

Purpose:

- To establish a consistent and evidence-based approach to calling heat alerts and communicating heat-health impacts across the Province

Needs:

- Understanding the burden of illness of heat in Ontario (urban vs. rural)
- Developing user-friendly tools to visualise/analyse multiple sources of information
- Increasing data sharing between organisations

Challenges:

- Capacity of rural/smaller public health units
- Data accessibility (health outcomes, climate indices, heat health vulnerability indices, etc.)
- Regional, municipal and public health administrative structure in Ontario

Data Needs and Gaps: Example 2

Heat Health Vulnerability Assessment

Purpose:

- To assess heat-health vulnerabilities within a community or region and promote action to reduce individual and community risks

Needs:

- Identifying appropriate community-based health indicators
- Identifying current vulnerabilities and assessing future health risks

Challenges:

- Local health data availability
- Capacity of communities to address identified vulnerabilities
- Methods to analyse and synthesize data
- Engaging stakeholders

Data Needs and Gaps: Example 3

The Urban Heat Island Effect in Canada

Purpose:

- To localise urban heat islands (hot spots) within a community and suggest options for adaptation and mitigation of the UHI effect

Needs:

- Identifying hot spots using satellite imagery and other sources of information (e.g. from air temperature models)
- Mapping the level of socio-economic deprivation in UHI areas
- Mapping green spaces and tree canopy (vegetation cover)

Challenges:

- Surface temperature from satellite imagery does not reflect urban air temperatures
- Availability of data related to indoor thermal conditions and building characteristics
- Quantifying health risks in highly deprived urbanised areas
- Costs of mitigation/adaptation measures for Canadian communities

Considerations for Future Research Activities

- Expand understanding of health impacts of heat and UHI impact in urban environments in Canada
- Development of user-friendly tools and guidelines for decision makers to support interventions during extreme heat events
- Integrated monitoring and surveillance systems that capture multiple sources of information (climate, socio-economic deprivation, health risks, etc.)
- Promotion of information sharing and knowledge translation

HC's Heat-Health Publications

http://www.hc-sc.gc.ca/ewh-semt/pubs/climat/index-eng.php

Thank you!

For more information, please contact:

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