



Hamilton

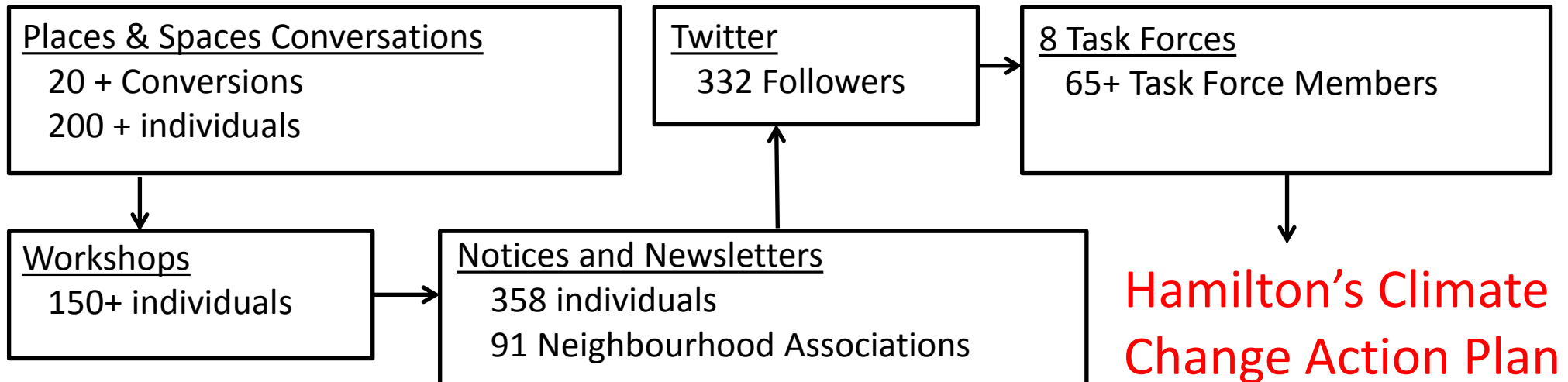
Climate Change

City of Hamilton Public Health Services

LET'S TALK ABOUT THE WEATHER



- “Let’s Talk About The Weather”: Community engagement campaign initiated in 2014 to develop 2016 Plan



Nine Themes to Plan

**Agriculture
& Food**

**Awareness
&
Education**

Energy

Infrastructure

**Land Use,
Buildings
& Build
Form**

**Local Economy
& Business**

**People
&
Health**

**Transportation
/ Mobility**

**Water &
Natural
Heritage**

TEN Main Priority Actions

1. Support local food production/consumption and integrate climate change mitigation/adaptation strategies into existing farm and food plans and initiatives.
2. Establish ongoing education and awareness program/campaigns for climate change.
3. Develop a Community Energy Plan to guide the Hamilton community's energy future.
4. Revise and update municipal infrastructure guidelines to prioritize Low Impact Development (LID) as a preferred method for stormwater management.
5. Establish variable development charges to reflect real cost of buildings and maintaining infrastructure.
6. Create an accessible toolkit for businesses to assist with impact analysis and business continuity planning.
- 7. Conduct a local community vulnerability assessment of public health impacts from climate change.**
8. Expand public transit services to include dedicated rapid transit lanes where possible.
9. Secure property that serves as source water storage or preserves wildlife corridors within the catchment.
- 10. Establish an ongoing oversight and coordination body to guide implementation of the Hamilton Climate Change Action Plan and report back on community progress and success.**

Hamilton Facts

Reductions

- Achieved 20% reductions of 2006 emissions in 2016 (20%)
- Back on track to achievements

Adaptation

- Science Report done for City (Posted online)
- Undertook ICLEI BARC for Corporate Risks
- Undertaking workshops with community members for Community Risks
- Inform Adaption work in 2018

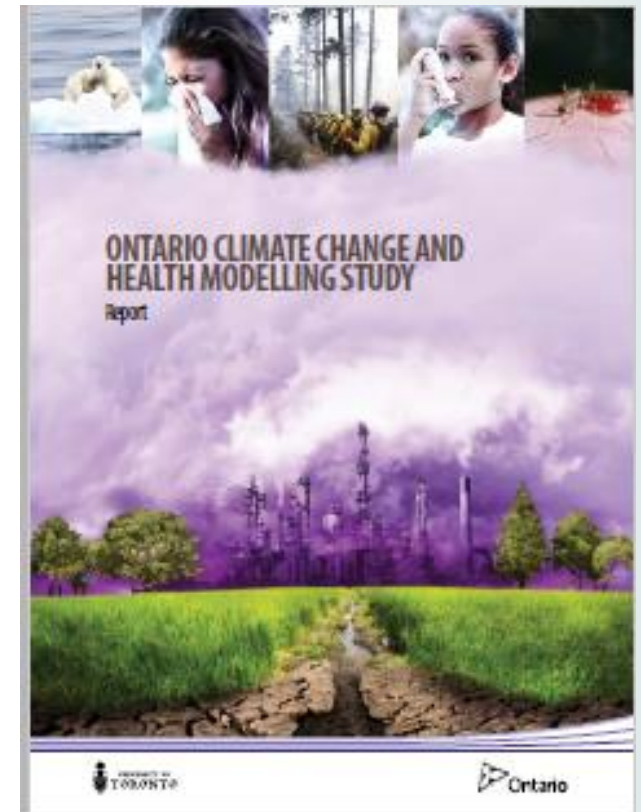
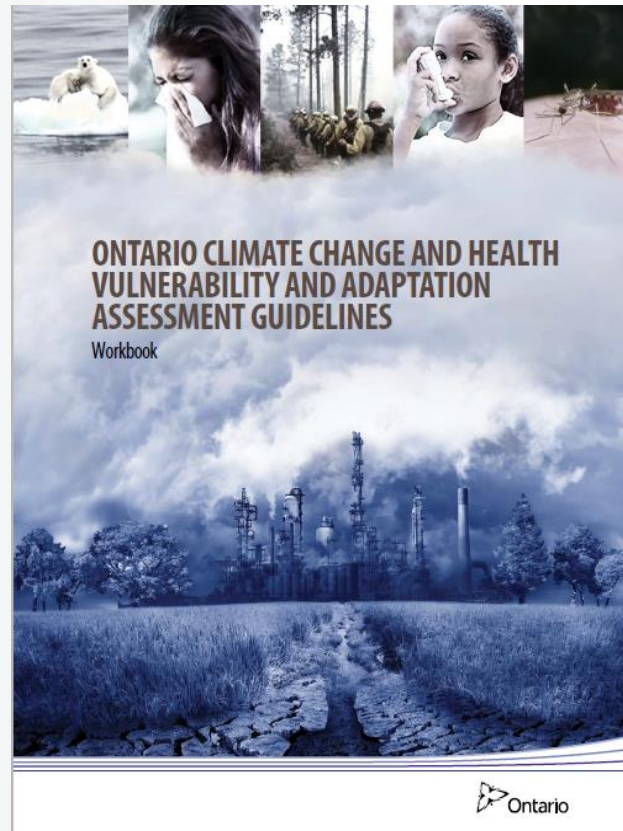
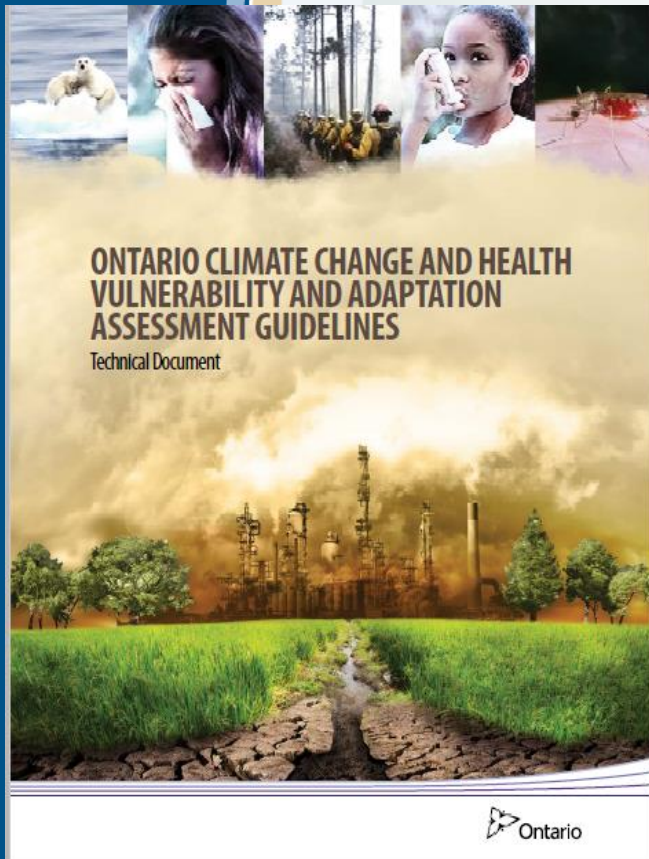
Projections:

Increased Heat
Increased Rain
Increase extreme events

Observed:

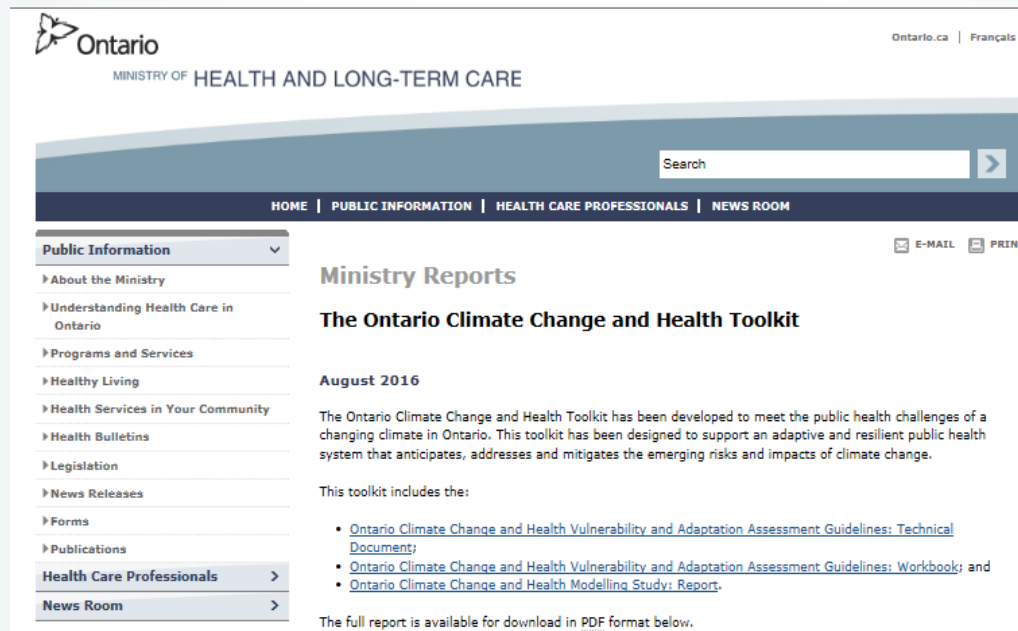
Flooding
Drought and Heat
High winds

Climate Change and Health



Climate Change and Health

- This toolkit is intended to provide practical guidance to public health units for conducting vulnerability and adaptation assessments to better anticipate, address, and mitigate the impacts and risks of climate change on health outcomes.



The screenshot shows the Ontario Ministry of Health and Long-Term Care website. The header includes the Ontario logo, the text 'Ontario.ca | Français', and 'MINISTRY OF HEALTH AND LONG-TERM CARE'. A search bar is located in the top right. A navigation menu at the top includes 'HOME | PUBLIC INFORMATION | HEALTH CARE PROFESSIONALS | NEWS ROOM'. On the left, a 'Public Information' dropdown menu is open, listing various categories. The main content area features a 'Ministry Reports' section with the title 'The Ontario Climate Change and Health Toolkit' and the date 'August 2016'. The text describes the toolkit's purpose and lists its components: 'Ontario Climate Change and Health Vulnerability and Adaptation Assessment Guidelines: Technical Document', 'Ontario Climate Change and Health Vulnerability and Adaptation Assessment Guidelines: Workbook', and 'Ontario Climate Change and Health Modelling Study: Report'. A link for downloading the full report in PDF format is provided at the bottom.



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Objectives

Importance

- (1) Understand current impacts and potential future risks and impacts of climate change from an environmental health perspective; and

Integration

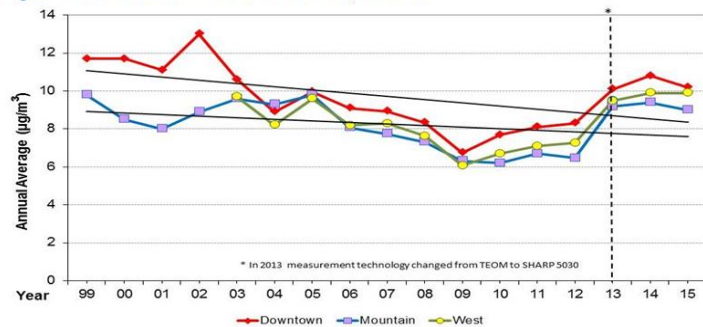
- (2) Inform and improve existing operational processes within the environmental health program to account for the impacts of climate change.



Climate Change and Health

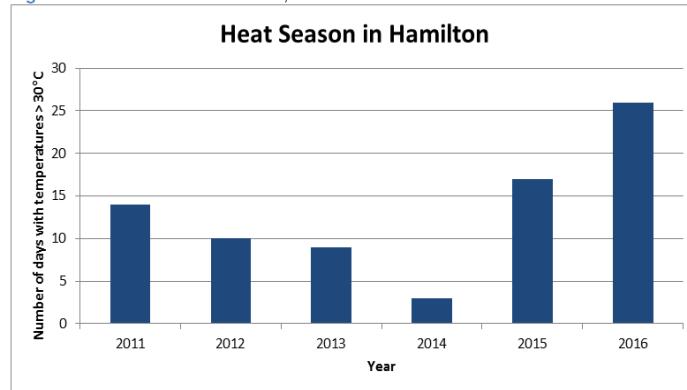
- Using the toolkit as a guide, this project used both quantitative and qualitative methods to explore and understand climate change impacts and inform operational processes within the environmental health program.

Figure 4: PM_{2.5} Concentrations in Hamilton, 1999-2015



CAH, 2016

Figure 1: Heat Season in Hamilton, 2011-2016



“Climate change is real... Certainly, there is an impact [of climate change] to public health.”

“I don’t have any great evidence.”

Each program would need to look at how it’s gonna affect them and what sort of timelines...



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Ticks & Lyme Disease

Lyme disease is mainly carried and spread by ticks from infected blacklegged ticks (formerly called deer ticks). Blacklegged ticks are closely related to spiders and are 1 to 2 mm in length when unfed. They are usually found on tall grass and bushes and attach themselves to people or animals that they come in contact with. They cannot fly and move slowly.



Blacklegged ticks are commonly found in long grass, brush, and wooded areas in Ontario and Quebec. They are also found in parks and gardens. They are most active in the spring and summer months. They are most likely to bite people and animals that are in contact with them. They can cause Lyme disease, a serious illness that can affect the joints, nervous system, and heart.



This summer please pay attention to the radio, TV and local newspaper for Public Health Services heat advisories, warnings or alerts and what to do in each case.

- Drink plenty of water.
- Go to an air conditioned place (cool place). Visit a mall, public library, public community centre, etc.
- Wear a hat and lightweight, loose-fitting clothing.
- Take a cool bath or shower.
- Close your blinds or curtains.
- Open windows to let in the breeze.
- Limit physical activities.
- Check on your neighbours.
- Never leave children or pets unattended in a vehicle.
- Seek medical attention if you experience symptoms such as sweating, paleness, nausea, dizziness, headache, etc.

WARNING
BLUE-GREEN ALGAE IS PRESENT IN HAMILTON HARBOUR

THIS AREA IS NOT SAFE FOR PEOPLE OR ANIMALS TO SWIM OR WADE

DO NOT EAT FISH CAUGHT FROM THIS AREA

For more information

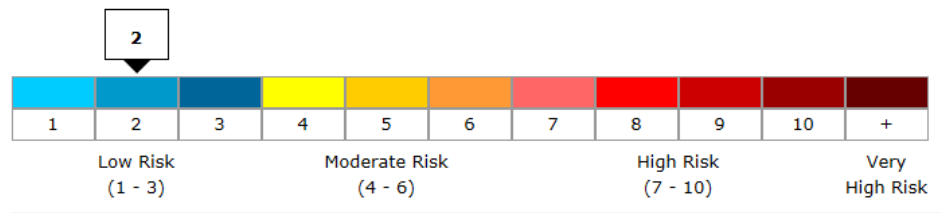
FOOD SAFETY INSPECTION

Methods- Quantitative

- The quantitative methods were used to understand current impacts.
- The quantitative data analysis was descriptive relating to the following issue areas:
 - Extreme temperature (i.e. heat, cold);
 - Air quality (i.e. air pollution, ground-level ozone, particulate matter);
 - Vector-borne diseases;
 - Food- and water-borne diseases.

Hamilton Downtown: Current Air Quality Health Index

Calculated at 10:00 am EST Monday, November 6, 2017



Methods- Qualitative

Appendix 1: Interview Guide

Date: _____

Climate Change and Public Health Practice Project Interview Guide

Interviewers: Konrad Lisnyj, MPH(c); Sally Radisic, PhD, CPH(C)

Interviewee: _____

Aim: to engage in 30 minute discussion with Environmental Health Managers and their respective program specialists to gain insight into key health concerns from climate change (i.e. temperature extremes, air quality, water- and food-borne diseases, infectious diseases transmitted via insects, ticks, and rodents).

Part A: Overall Perceptions of Climate Change and its Effects on HPHS

1. As a manager/specialist of your program, what does climate change mean to you?
2. What are your perceptions of climate change on how it is impacting your public health program?
 - Probe: What are your perceptions of climate change on how it is affecting HPHS, your program, or public health in general?
 - Probe: Are there any priority areas?
3. Do you believe HPHS has a responsibility to address climate change, or should it be an issue at the provincial or national level?
 - Probe: Is there any value to invest in climate change research at the municipal level?
 - Probe: Should there be a larger emphasis on climate change in HPHS plans?
 - Probe: What program within HPHS do you think will be most affected by climate change?

City of Hamilton, 2016

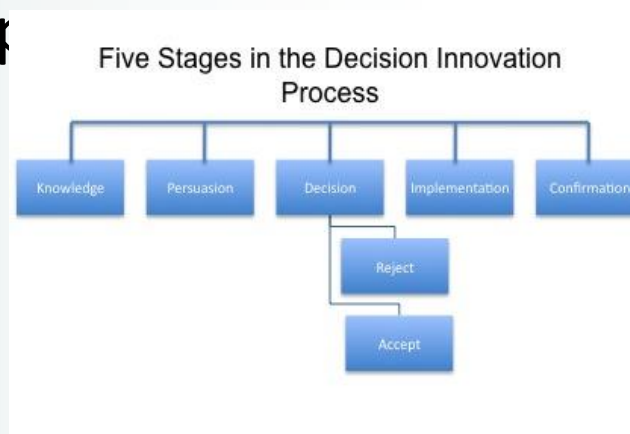


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- The qualitative methods including semi-structured interviews with key stakeholders (i.e. program managers and/or specialists) were used to inform and improve existing operational processes to better understand how we can account for climate change impacts within the environmental health program .
- The qualitative phase of this study used the Diffusion of Innovations (DOI) theory (Rogers, 2003) to inform the interview questions.

Methods- Qualitative

- The five stages of the adoption process include: (1) knowledge; (2) persuasion; (3) decision; (4) implementation; and (5) confirmation.
- we explored program experts' attitudes on climate change knowledge, perceptions, roles and responsibilities, and barriers and facilitators influencing climate change adoption in order to operationalize climate change and health impacts within existing HPD



Rogers, 2003



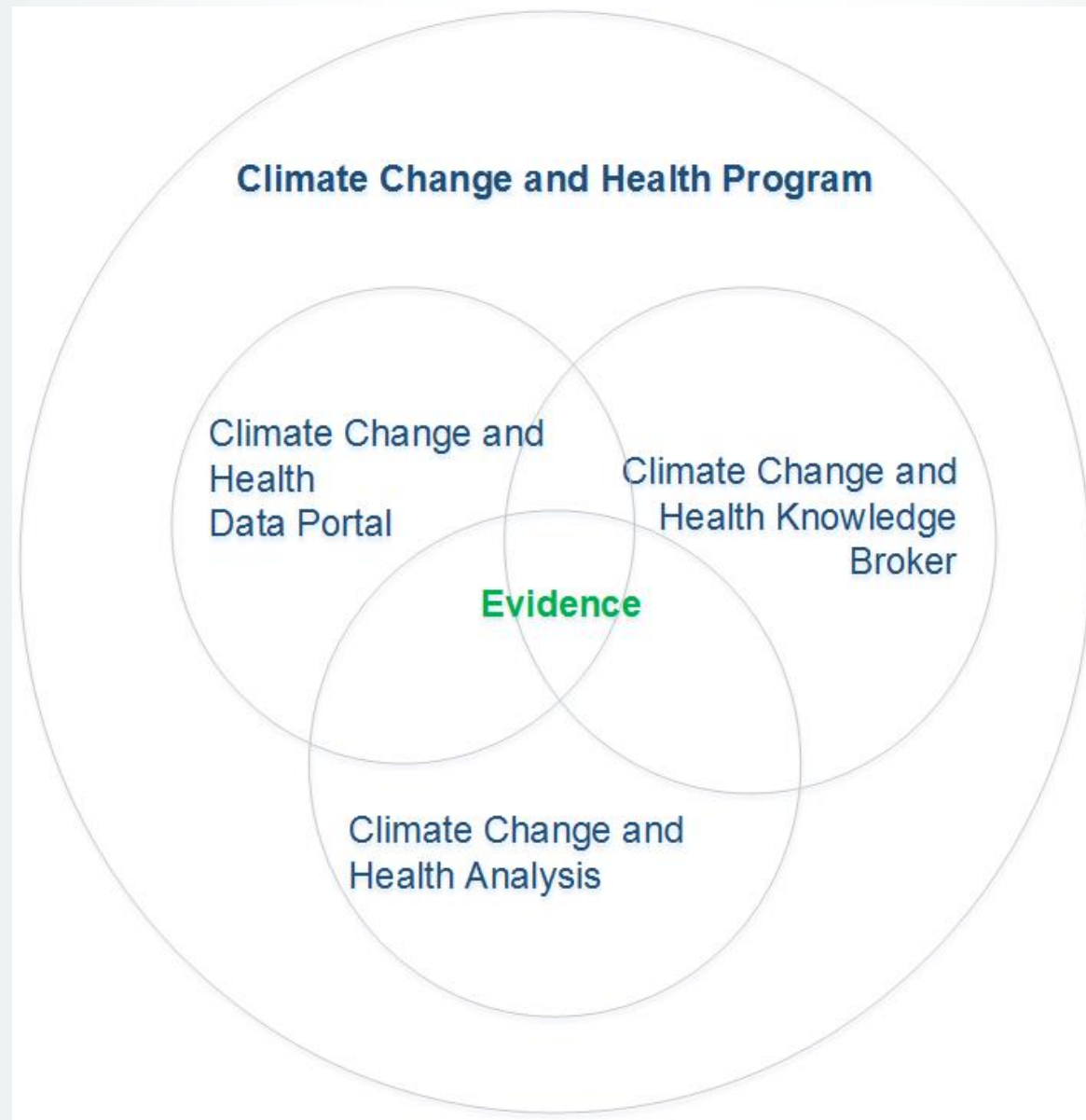
Key Findings

Table 2: Themes Corresponding to Climate Change and Health Perceptions, Roles and Responsibilities, Barriers, and Facilitators

Category	Theme
Perceptions of Climate Change	Climate Change is a Reality Program Impact Uncertainty
Roles and Responsibilities	Public-Private Collaboration
Barriers	Lack of Evidence Resource Constraints
Facilitators	Existing Policies and Procedures Organizational Engagement Climate Change Program



Climate Change and Health Operational Process Model



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Thank You



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