

# Healthcare Service Delivery, Extreme Weather & Chronic Stressors

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Climate Resilience & Adaptation Program  
Lower Mainland Facilities Management

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# Strengthening Resilience for Healthcare Service Delivery

- ✓ Assess **climate risks**
- ✓ Identify **resilience actions**
- ✓ Highlight **mitigation co-benefits**
- ✓ Review **challenges & lessons learned**



# Project Method

**CLIMATE RISKS AND COMMUNITY VULNERABILITIES ASSESSMENT**

**ELEMENT 1 CHECKLIST**

**LAND USE, BUILDING DESIGN AND REGULATORY CONTEXT**

**ELEMENT 2 CHECKLIST**

**INFRASTRUCTURE PROTECTION AND RESILIENCE PLANNING**

**ELEMENT 3 CHECKLIST**

**ESSENTIAL CLINICAL CARE SERVICE DELIVERY PLANNING**

**ELEMENT 4 CHECKLIST**

**ENVIRONMENTAL PROTECTION AND ECOSYSTEM ADAPTATIONS**

**ELEMENT 5 CHECKLIST**

**GENERAL**

GENERAL	Value	Rank
5.0.1 A climate resilient health care facility recognizes and commits to sustainable practices that benefit the hospital and broader community. Does your health care facility undertake any of the following measures to be more sustainable?		
• Develop sustainability goals and action plans	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Track sustainability performance (setting targets, identifying indicators)	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Implement strategies and activities to continuously improve sustainable management	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Build community partnerships with organizations or agencies to contribute to a resilient community	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Learn about new and emergent programs and technologies to be more sustainable (assessing sustainable practices of suppliers, for example)	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
5.0.2 Many states and municipalities have begun to address climate change by developing climate action plans, undertaking vulnerability assessments, and restoring or adapting ecosystems for improved resilience. Is your health care facility aware of or participating in ecosystem based climate change adaptation or mitigation initiatives in your area?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
5.0.3 Do you design and construct buildings using green design best practices, standards or guiding principles (e.g. Leadership in Energy and Environmental Design (LEED), Living Building Challenge, or equivalent)?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
5.0.4 Does your health care facility take any of the following measures to contribute to improving air quality in your community?		
• Engage in air quality initiatives in the community	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Avoid the use of toxic chemicals wherever possible indoors	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Avoid the use of toxic chemicals wherever possible in landscape management	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Support local suppliers to reduce transportation miles for supplies	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Support mass transit, carpooling, or ride sharing	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
• Support surface transportation, walking or biking	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	

## SUSTAINABLE AND CLIMATE-RESILIENT HEALTH CARE FACILITIES TOOLKIT



# Project Method





# Project Method



# Resilience Actions: Examples

## Extreme events



**Flood** water contaminating drinking water causing grid water system failure



**Heat wave** overloading cooling system causing failure(s)

## Resilience actions

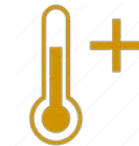
**Install a rainwater harvesting system for utility use**

**Plan equipment upgrades according to projected climatic averages & ranges**

## Chronic stressors



**Decreasing snowpack** reducing water availability



**Increasing average temperature** resulting in gradual increase in # hot days causing discomfort

# Resilience & Mitigation Co-Benefits

## Resilience Action

**Plan** upgrades & retrofits  
to climate projections

**Local** food & fuel supply chains

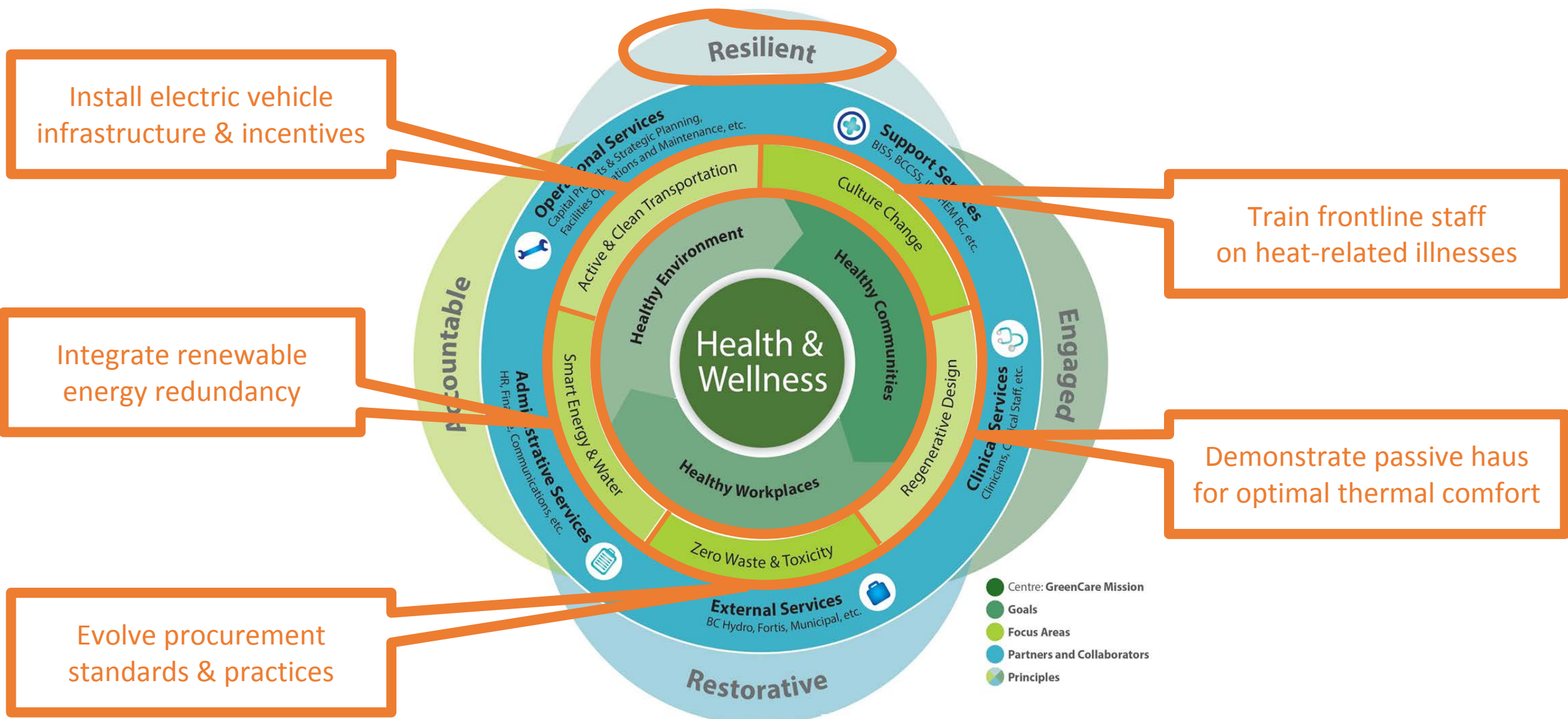
## Mitigation

Improved energy efficiency  
& conservation in buildings

Fit-for-purpose HVAC systems  
& critical equipment

Local, diverse & distributed  
supply chains

# Sustainability & Mitigation Co-Benefits



- Centre: GreenCare Mission
- Goals
- Focus Areas
- Partners and Collaborators
- Principles



# Challenges

Leadership & organization **buy-in**

In-region **knowledge & capacity**

Action **implementation**

**Silos & specializations**

# Lessons

Align with **mandates** & frameworks

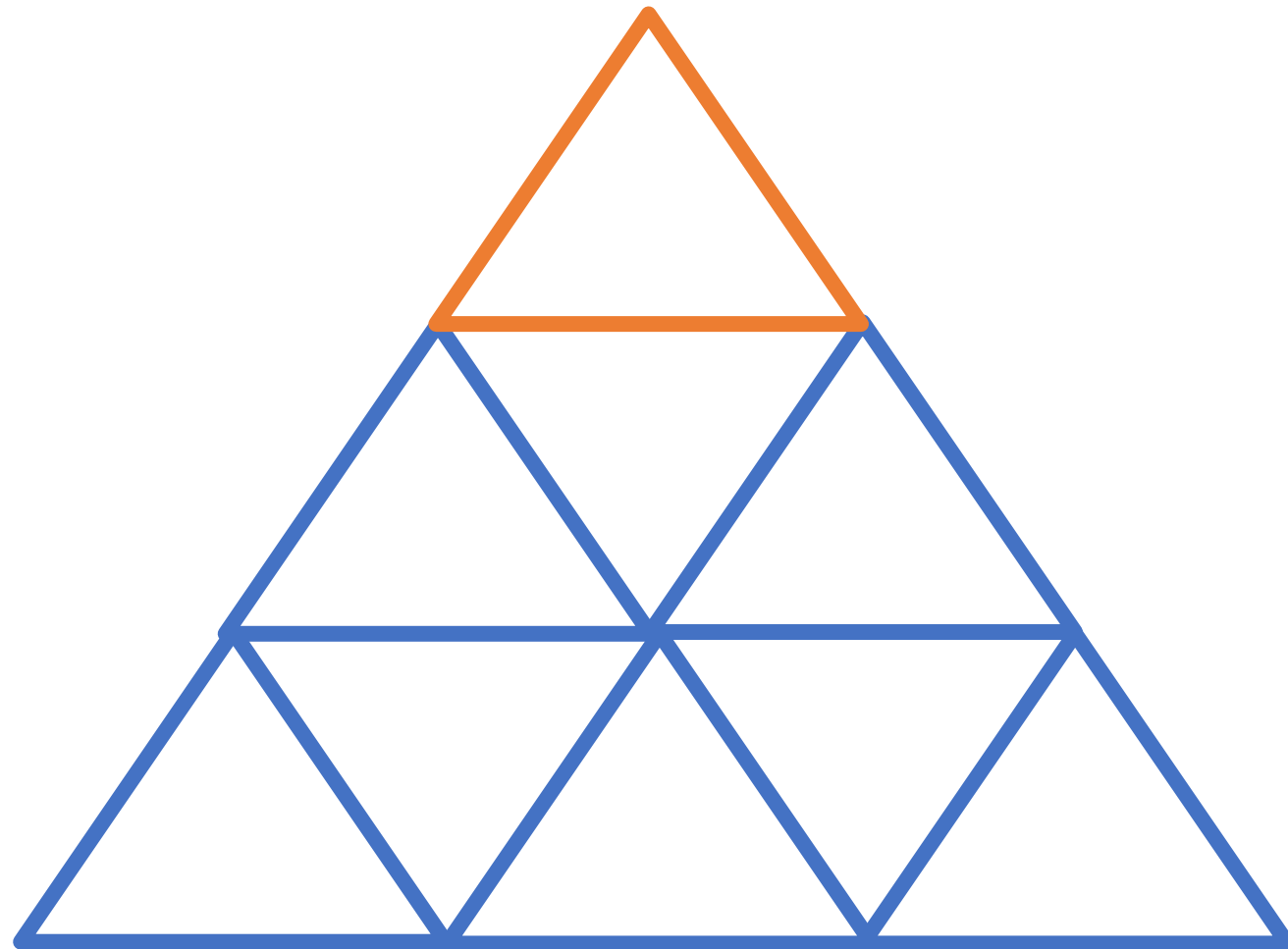
Develop **communities of practice**

Identify **action paths** & prioritize **scalability**

Use an **holistic & inclusive** approach



# Resilience Actions - Adaptation Plans





**THANK YOU!**

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# Questions?

