



# The YMCA of Greater Toronto



## Climate Resiliency Strategy

January 2019

**FINAL**

*Revised in June 2019 with links to City of Toronto Resilience Strategy (see page 4)*

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# Introduction

As the risks from a warming world intensify, so will the consequences for humanity and the natural environment—from disruptions in food, water, and energy supplies to increases in damage from extreme weather and sea level rise. Climate change will impact and influence community health and stability. The year 2016 was another record-setting year in terms of high average global annual temperature. It seems each week we hear of another extreme weather event, from flooding to wildfires to extreme heat, and the frequency and intensity of these events are expected to get worse. Climate change and extreme weather have translated into steep economic costs affecting public safety, public health, food security and emergency management. Our youth are central to this disaster, as our actions are affecting the future that they are inheriting. Preparing our communities to cope with and respond to these changes is becoming more important. We need to actively embrace climate resilience to prepare for the future and alleviate the long-term costs of climate change.

## **What is Resilience?**

Resilience is the ability of a community to survive, adapt and grow no matter what kinds of chronic stresses and acute shocks it experiences. Resilience requires communities to take transformative short- and long-term actions that allow them to endure and thrive in all conditions.

**Chronic stresses** weaken the fabric of a community on a day-to-day or cyclical basis. (Examples include: high unemployment, homelessness, lack of social cohesion and poverty / inequity.)

**Acute shocks** are sudden, sharp events that threaten a community. (Examples include: wildfires, floods, heat waves and disease outbreaks.)

For over 165 years, YMCA of GTA has been a leader in the delivery of health promoting programs, helping people stay healthy, active and changing lives. We have and are continuing to develop centres of community, creating places for connections, belonging and addressing holistic needs of people and diverse communities within the GTA. Our 2010-2020 Strategic Plan, *Strong Start Great Future*, Roadmap to 2020 utilizes the Social Determinates of Health framework, which recognizes that health is the by-product of where you live, work, learn and play. This Climate Resiliency Strategy is our recognition that to fulfill our Strategic Plan and Roadmap to 2020 we must integrate an understanding of climate change into our efforts. Applying a climate change lens to our community-building activities will help to ensure we have a strong start towards a climate-resilient future .

While the changing climate will impact everyone in some manner, vulnerable populations will be disproportionately impacted. In Canada and around the globe, vulnerable populations tend to live in places more exposed to climate risks, and they have fewer resources to adapt to changing conditions or recover from extreme weather events. Governing institutions often lack the tools, resources and other capacities they need to effectively serve these populations. The people themselves have limited power, voice and access to information. Community organizations such as the YMCA of GTA have an important role play in preparing communities for the impacts of climate change and protecting the people who need it most.

Organizations must also consider and respond to the impacts of climate change. Instead of attempting to insulate themselves from their external environments, leading organizations are embracing their interdependencies with society and enhancing the resilience of the communities in which they operate.



The YMCA of GTA can do this by protecting and sustaining the community's assets to ensure its ongoing health and prosperity, and applying frameworks that help us think about the characteristics of a resilient community. In this process, the YMCA of GTA can become both a partner in, and a beneficiary of, resiliency.

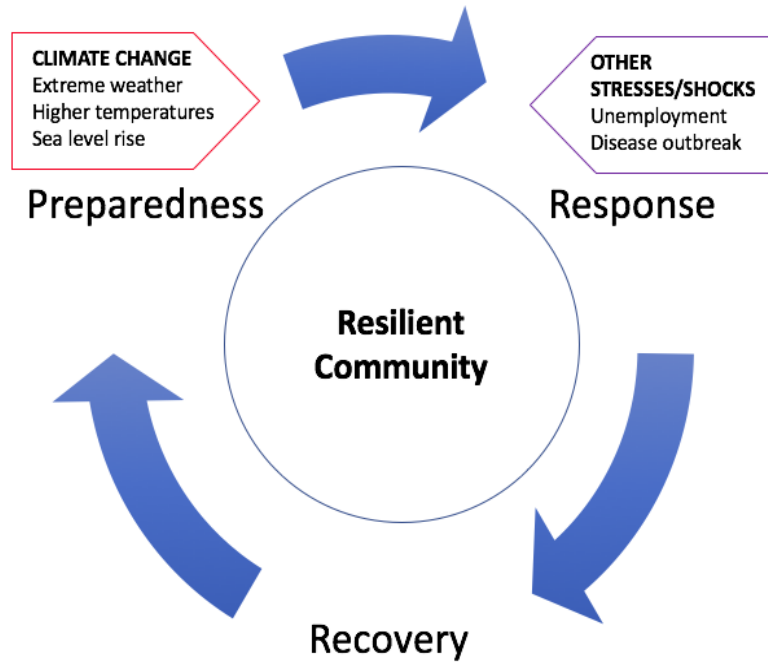


Figure 1 Elements of a Resilient Community

## YMCA of GTA's Role in Building Climate Resiliency

YMCA of GTA is dedicated to the growth of all persons in spirit, mind and body, and to their sense of responsibility to each other and the global community. It plays a central role in building prosperous communities, with a focus on the most vulnerable citizens and underserved populations. It creates healthy communities that care for and cultivate healthy individuals. YMCA of GTA helps communities and individuals through key *transitions* – from youth to adulthood, newcomer to resident, and traditional to a lower-carbon economy. YMCA of GTA operates through the Social Determinants of Health framework, which recognizes that there are certain underlying conditions that influence the health of populations. These underlying conditions include decent employment, secure housing, social support networks and education. In this way, YMCA of GTA helps to address many of the chronic stresses faced by communities on a daily and ongoing bases.

YMCA of GTA is also a recognized sustainability leader. It has a demonstrated track record in promoting resource and energy efficiency at its facilities, fostering alternative energy generation capacity and increasing access to services for affected residents during emergency situations. It also provides leadership around urban farming, sustainable living and waste management.



YMCA of GTA occupies a unique role in the GTA. It acts as a conduit between the government, the private sector and the citizens of the region. It provides a forum for communication, collaboration, interaction and experimentation to tackle societal issues. YMCA of GTA is a trusted partner of government, a central cache for some of the goods and services provided by the private sector and a strong voice for community members.

YMCA of GTA is also a central meeting place and support platform for our youth. Our children stand to gain – or lose – much in the global fight against climate change and are integral players in tackling this issue. As the inheritors of the future of this planet, our youth will be dealing with the consequences of past and current societal actions during their lifetimes. With bright minds and long futures ahead, our youth have the opportunity to tackle these issues and work towards greater sustainability and resiliency in the future – and YMCA of GTA allows them the space to think about innovative climate change solutions. The role of organizations like YMCA of GTA in supporting these efforts by helping to instill a sense of responsibility for the environment, each other and the global community is vital. YMCA of GTA



can leverage its unique role and relationship with these various actors and make significant contributions to community resilience in the GTA.

There is now an opportunity to continue to push forward in the fight against climate change, not only by mitigating climate change through a reduction of greenhouse gas emissions but also through helping communities adapt to the impacts of a changing climate and become more resilient. Climate change permeates the YMCA of GTA's mandate, as it presents serious risks to our health and communities. YMCA of GTA is well-positioned to lead in building community resilience. It is already an instrumental player in addressing the chronic stresses communities face and is starting to fill an important gap in the GTA's ability to respond to those acute shocks and emergency situations.

This Climate Resiliency Strategy aims to help the YMCA of GTA as an organization become more resilient to the physical, social and economic challenges of climate change, as well as provide leadership in developing community resilience throughout the GTA. In other words, it focuses both on the organization's internal goals and operations as well as how it interacts with and improves the local communities it serves and operates within. This Strategy builds on and expands YMCA of GTA's Sustainably Green Initiative, dated September 2011.

The intention of this document is to show the need for leadership on organizational and community climate change resilience, showcase how the YMCA of GTA is taking a leadership role in this area and provide a model climate change resiliency strategy for others to learn from. This document is being shared to help motivate other organizations to think about these issues in a similar way. We can learn, grow and share climate resiliency best if we work as a collective, building on pre-existing knowledge and experiences.

### **City of Toronto's Resilience Strategy**

The City of Toronto released their first Resilience Strategy in June 2019. Our President and CEO Medhat Mahdy was a member of their Steering Committee that helped inform the creation of the Strategy. The [159-page document](#) references the YMCA of Greater Toronto throughout, with a feature call-out box on page 152, with the following text:

*"The YMCA of Greater Toronto is working to increase community resiliency and protect vulnerable populations. The YMCA recognizes its important role in supporting and enhancing community resilience and has developed its own Resiliency Strategy to guide this effort. The YMCA's Strategy helps apply a climate resilience lens to strategic actions and priorities.*

*As part of this Strategy, the YMCA plans to turn existing and new Centres of Community (health and fitness centres) into Community Resiliency Centres. This would allow the YMCA Centres to generate their own electricity on-site and continue to support the community even if the electricity grid is compromised in an emergency. This will be accomplished by installing high-efficiency combined heat and power energy systems. The YMCA will also integrate other resilience-building and low-carbon microgrid measures including solar panels, battery energy storage systems, electric vehicles chargers, advanced controls, and backup generators where combined heat and power energy system are not possible.*

*These investments will increase the resilience of communities throughout the region by providing the public with safe havens in the event of power outages and other emergencies while providing safe and reliable command centers for first responders."*



# YMCA of GTA’s Climate Resiliency Framework and Priority Actions

The YMCA Climate Resilience Framework is a framework developed with YMCA of GTA’s specific mandate, strengths and strategic goals in mind. A helpful guide throughout the process was the City Resilience Framework (CRF), developed by Arup with support from The Rockefeller Foundation. The CRF is being used by cities in the 100 Resilient Cities network to guide a common understanding of and approach to the practice of building city resilience.

The Framework is broken up into four dimensions that attempt to chart out the complexity of communities and the drivers that contribute to each dimension’s resilience. Looking at these drivers can help the YMCA of GTA to assess the extent of its organizational and community resilience, identify critical areas of weakness and develop actions and programs to improve resilience.

## YMCA Climate Resiliency Framework

DIMENSION	DRIVER OF CLIMATE RESILIENCE
Society and Economy	Protects stability, safety, fairness and a sense of belonging in social environments for all genders, cultures and people.
	Cultivates cohesive, engaged, equitable and inclusive communities and social support networks.
	Fosters economic opportunities for all social groups and income levels through education, training and quality employment/working conditions.
Environment and Infrastructure	Protects and enhances natural and infrastructure assets through environmental responsibility and stewardship.
	Improves the physical environment by creating green gathering and recreational spaces that provide healthy food access and assist in adapting to the impacts of climate change.
	Promotes reliable and clean forms of energy and encourages the efficient use of resources.
Health and Well-Being	Increases access to basic resources necessary to survive, particularly in times of crisis, and be resilient to emergencies.
	Offers public health services and support systems.
	Promotes sound social and human development through personal health practices, coping skills and healthy child development.



<b>Leadership and Strategy</b>	Fosters participatory and integrated planning by encouraging government and civic engagement.
	Empowers a broad range of stakeholders to speak out, make change and take leadership in their communities.
	Promotes progressive leadership and effective management.

By applying this Framework, the YMCA of GTA can make meaningful progress in enabling healthy, safe and sustainable communities that are resilient to climate change.<sup>1</sup>

The following sections outline eight strategic Climate Resiliency Goals that will guide the YMCA of GTA’s resiliency activities. Each Climate Resiliency Goal is accompanied by an overarching vision, key elements the YMCA will seek to implement over the next ten years and success stories that showcase some of the important projects the YMCA will be building on as it moves toward improved climate resiliency.

These goals and corresponding elements will be holistically addressed through the following four Priority Actions.

<b>Priority Actions</b>	
<b>1</b>	YMCA of GTA will build capacity and capabilities to respond to acute shocks like extreme weather through its Community Resiliency Centres and will provide strategic leadership within the City of Toronto’s resiliency efforts
<b>2</b>	YMCA of GTA will continue to address chronic stresses like poverty through implementation of its 2010-2020 Strategic Plan and 2016-2020 Four Year Roadmap, applying a climate resiliency lens
<b>3</b>	YMCA of GTA will continue develop and manage its facilities and programs to reduce the impact of climate change and foster community resilience
<b>4</b>	YMCA of GTA will act as a knowledge centre, sharing information and best practices on climate-related issues and resiliency

<sup>1</sup> Note that this Resiliency Strategy is distinct from, but linked to YMCA Community Health Monitoring Framework, which is referenced in more detail in the discussion of Goal 4: Improved health and wellbeing.



# YMCA of GTA's Climate Resiliency Goals

The YMCA of GTA has identified eight strategic Climate Resiliency Goals. These align with the organization's mandate, build on existing efforts and will guide the organization's climate change resiliency actions to ensure that they are most impactful over the coming decade.



01 Foster a Connected and Prepared Community

*Society & Economy*



02 Promote Clean Technology and the Efficient Use of Resources

*Environment & Infrastructure*



03 Adapt to the Impacts of Climate Change

*Environment & Infrastructure*



04 Improve Health and Well-Being

*Health & Well-Being*



05 Support and Integrate Vulnerable Populations

*Society & Economy*



06 Work with Government to Better Serve the Community

*Leadership & Strategy*



07 Catalyze Innovation and Private Sector Action

*Environment & Infrastructure*



08 Build Regional Resilience

*Leadership & Strategy*



The Climate Resiliency Goals are grouped according to the four Framework dimensions of climate resiliency: (1) **society and economy**; (2) **environment and infrastructure**; (3) **health and well-being**; and (4) **leadership and strategy**. Such grouping was carried out primarily for organizational purposes and should not be interpreted as hard lines of distinction. Rather, as demonstrated by Figure 2 below, the Climate Resiliency Goals are highly interconnected.

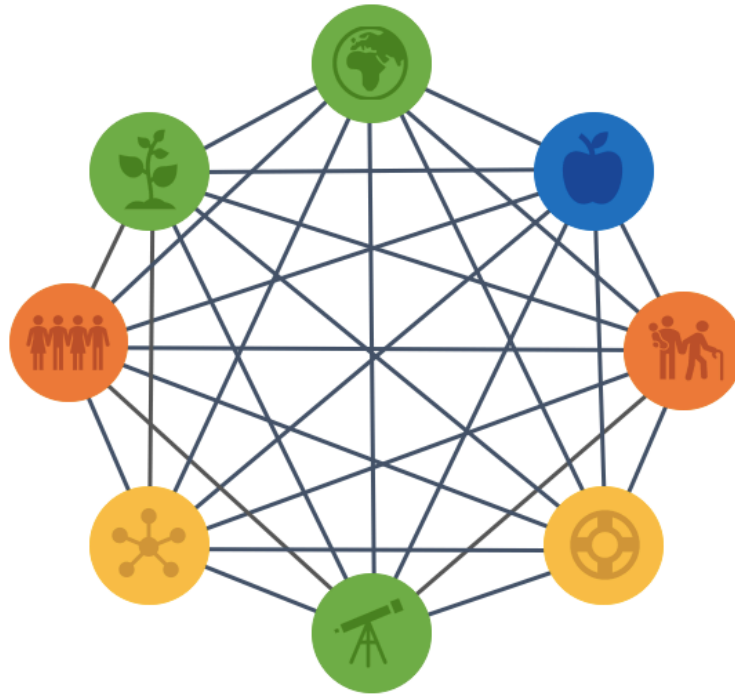


Figure 2 Interconnectedness of Strategic Resiliency Goals

For instance, Goal 3 - Improving Health and Wellness also helps to realize Goal 5 - Supporting and Integrating Vulnerable Populations. Similarly, Goal 7 - Catalyzing Innovation and Private Sector Action also supports Goal 2 - Promoting Clean Technology and the Efficient Use of Resources. If one Climate Resiliency Goal falls, it can still be supported and upheld by the interconnected web of the others.

The four Priority Actions will help the YMCA of GTA reach its Climate Resiliency Goals and associated elements in a holistic and integrated way, aligned with the visioning laid out in our 2010-2020 Strategic Plan, *Strong Start Great Future*.



## 01 Foster A Connected and Prepared Community

### Society & Economy

Climate change, extreme weather and other stresses can threaten the health and stability of communities. A resilient community is one that is properly prepared for stresses, able to respond in times of emergency and adept at quickly recovering from disruptive events.

Fundamental to preparedness and community vitality is connectivity and the ability for all members to contribute to the building of strong social environments, as well as response and recovery when disaster strikes. Community connection can be as simple as knowing your neighbors, but it can also mean building new relationships and capacities between the GTA and local organizations. Everyone involved in the YMCA of GTA is part of our community.



The strengthening of social networks and planning within a community are critical to enhancing climate change resiliency. Cohesive communities with high levels of social inclusion are better able to share resources and support each other in response to longer term stresses and more acute shocks. Ways to build connectivity include cultivating relationships with and checking in on neighbors, and ensuring the availability of adequate neighborhood gathering and resource centers. A connected community also ensures that the GTA's most vulnerable residents have vital lifelines before, during and after a disaster. By enhancing connection and preparedness, the YMCA of GTA can empower everyone to take quick action in times of disaster, while also deepening the overall sense of community.

*The YMCA of GTA will empower all residents to contribute to diverse, thriving, inclusive, innovative and supportive communities.*

### Elements

1. We will continue building programs, spaces and services that encourage inclusion and the building of community networks. We will act as centres of community support, distributed across the GTA, addressing chronic community stresses and providing essential services on a daily basis to thousands of GTA residents, including seniors and youth, creating critical, multi-benefit facilities in our community. We will help to ensure that families have the support they need by offering a variety of child and family care services, including early learning, before and after school programs and teen nights. Additionally, we will work to support connectivity and access to information in the community.



2. We will work to connect residents with the city in times of acute shock by launching a Community Resilience Center (CRC) Program.<sup>2</sup> CRCs could act as resiliency hubs in times of extreme weather events or other disasters, providing back up power, shelter, access to bathroom facilities, childcare, food distribution, and other services to those in need. CRCs would also be “drop-off” and collection points for emergency supplies and first responders.
3. We will foster neighbor-to-neighbor connections, which have been shown to strengthen communities on an ongoing basis, as well as before and after a major disaster. These connections are especially important when government resources and assistance may not be available immediately and socially-isolated seniors and residents with disabilities are especially vulnerable. Figure 3b maps out the vulnerable populations in the GTA, with a specific focus on vulnerability to extreme heat.<sup>3</sup> Figure 3a maps out the locations of the YMCA of GTA, including child care centres, demonstrating how well-situated these locations are to act as hubs for the most vulnerable populations in times of need.

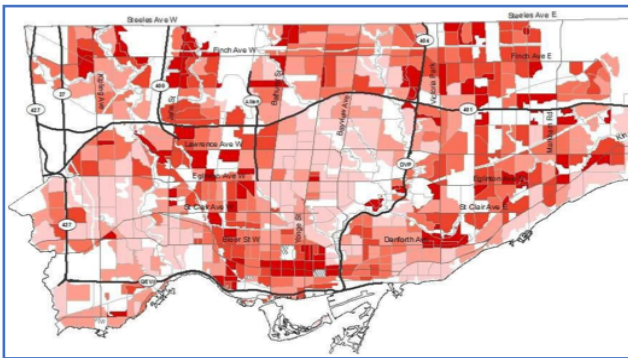


Figure 3a Map of YMCA Locations in GTA  
(Source: Google Maps, 2017)

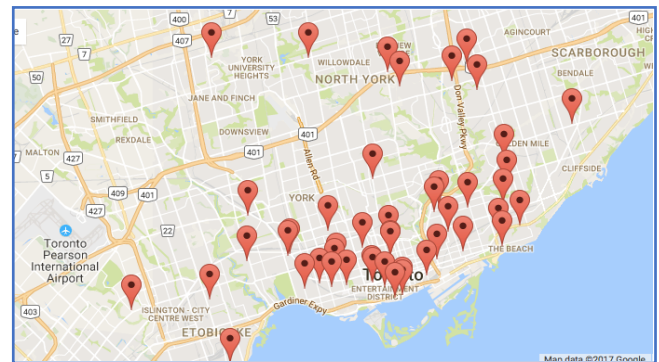


Figure 3b Vulnerability to Heat in Toronto  
(Source: City of Toronto, 2011)

4. We will promote a participatory and inclusive disaster risk reduction approach and explore the development of programs to inspire and equip people to be more active in community resilience. Such programs could provide us with an understanding of the issues, needs and opportunities associated with community members helping one another in times of emergency. Based on this understanding, we could explore the development of training and information sessions on disaster planning to ensure people in the community have the tools and resources they need to be prepared and facilitate faster recovery through city and community relationships.
5. We will continue to create spaces and programs for young people to come together and build supportive networks and leadership skills, as well as tackle shared challenges related to healthy living. Through participation in the Smart City Challenge, among other regional initiatives, YMCA

<sup>2</sup> See the [City of Berkley's example](#), where the city partners with community-based organizations to provide free disaster supply “caches” and disaster planning assistance to community-based organizations, including large apartment buildings, social service providers, and cultural centers. CRCs will serve as hosts for training and conduits to information and support tailored to the needs of the people in the community.

<sup>3</sup> Vulnerability for this map was determined based on exposure and sensitivity to heat; however, the factors considered are also relevant in determining vulnerability to other climate change and extreme weather scenarios. Factors considered included: having access to air conditioning; amount of green space in the area; proximity of services; physiological, medical, behavioural, and social factors such as old age, youth, some pre-existing illnesses, isolation and poverty. The impacts of heat are disproportionately borne by frail, elderly, and isolated people. See < <http://www.toronto.ca/legdocs/mmis/2011/hl/bgrd/backgroundfile-39469.pdf>> for more details.



of GTA will empower communities to address local issues their residents face, including a changing climate, and achieve outcomes through the use of data and connected technology.

### Building on Progress to Date

- Partnership with the City of Toronto and other municipal and community partners to build additional resiliency into YMCA of GTA and increase its role as emergency response centres.
- Learning from the roles played by the Alberta YMCA supporting those affected by the Fort McMurray wildfires, by the NYC YMCA after Hurricane Sandy and by Houston and Florida YMCAs after the 2017 Hurricanes.
- Social programming and community connectivity including: early learning and care, before and after school care, teen nights, family support programs and youth housing.

#### ***SPOTLIGHT: YMCA Early Childhood Education, Before and After School Care and Family Support***

The YMCA is the largest not-for-profit child care provider in Canada. With more than 40 years of experience and over 290 licensed programs throughout the Greater Toronto Area, the Y offers high-quality child care programs for infants, toddlers, preschool and school aged children. Its highly trained Registered Early Childhood Educators partner with parents to support each child's development and provide families with the security of knowing their child is in a safe and nurturing environment during these formative years. Similarly, the YMCA Before and After School Care programs are offered in over 180 locations in the GTA, with operating hours and fees that are workable for a range of schedules and budgets. YMCA Family Support programs bring parents, children, caregivers and entire families together through drop-in and registered programs. Early Learning experts support the delivery of formal and informal services that help families communicate better with each other and make connections within their community.





## 02 Promote Clean Technology and the Efficient Use of Resources

### *Environment & Infrastructure*

It is our collective responsibility to fight climate change together to ensure a stabilized future for all. As climate change is caused by anthropocentric greenhouse gas emissions, we must reduce GHGs across the globe. Key sectors for targeted reductions in the GTA include buildings and transportation. The region is also looking to enhance energy security, as major disasters have the ability to disrupt the power grid, which cause a loss of power and inadequate access to backup power and lead to a cascading set of impacts that impede delivery of essential services for people in need, disrupt the economy and hamper disaster recovery.



Clean technology solutions such as renewable energy, battery storage and electric vehicles are needed to ensure a move towards a low-carbon economy. Distributed generation, such as from combined heat and power (CHP) or solar installations, can also play an important role, as it increases resiliency of energy infrastructure, enables integration of renewables and improves energy efficiency by capturing heat that is normally wasted.

YMCA of GTA's core values of health and responsibility call out to green solutions and the concept of environmental stewardship. Our members and staff, championed by youth, have interpreted the definition of community to include our natural environment. YMCA of GTA has and will continue to embrace our environmental responsibility and remain committed to the efficient use of our resources.

*YMCA of GTA will encourage the efficient use of our resources and help to accelerate a clean energy future.*

### **Elements**

1. We will strive to better understand our environmental footprint and reduce our impact by engaging in environmentally responsible practices. We will seek ways to minimize our consumption of resources, including energy, paper and water, and explore methods to reduce our generation of waste and GHG emissions. We will measure, track and report on our progress against our baseline year of 2008 in periodic reporting.
2. We will promote resource and energy efficiency at our facilities through the implementation of leading green building solutions such as sub-metering energy optimization and life cycle analysis. We will reduce our overall energy use below our 2008 baseline by implementing energy-saving techniques, using high-efficiency equipment in renovations and new developments and encouraging our vendors to provide energy-efficient products by including criteria in our procurement policies, where appropriate.

3. We will reduce overall GHG emissions and environmental footprint below our 2008 baseline by promoting the use of public transport and teleconferencing; reducing the amount of toxins and volatile organic compounds released into the atmosphere; minimizing waste sent to landfill; promoting the reduction, reuse and recycling of materials; and reducing water used across the organization.
4. We will foster alternative energy generation capacity through the use and promotion of solar PVs, geothermal, wind power, battery technology and the development of clean energy micro-grid networks, where possible.
5. We will support EVs as a solution for clean transportation by installing Electric Vehicle Service Equipment in select locations throughout the GTA and pioneering effective pay-per-use and signage options.

### Building on Progress to Date

- Solar panels installed at Markham YMCA through Ontario's Feed-in-Tariff program.
- Renewals and retrofits including HVAC renewal, lighting and controls retrofits, sub-metering and energy optimization, BAS installation and upgrades and pool systems savings.
- Cooper Koo Family YMCA EV Charging Microgrid Demonstration Project.
- Greening YMCA Cedar Glen Outdoor Centre master plan. Exploring renewable energy at YMCA Cedar Glen, including bio-based heating for greenhouse.
- Young Street YMCA In-house waste reduction and recycling program.
- Green Procurement Strategy for Products and Services.
- Low Carbon Construction Materials Analysis for The Atmospheric Fund.

#### ***SPOTLIGHT: Cooper Koo Family YMCA EV Charging Microgrid Demonstration Project***

The Cooper Koo Family YMCA hosts an innovative urban energy system demonstration project. This system is designed to reduce electricity costs, lower carbon emissions, and provide emergency power during times of electricity grid failure to electric vehicle chargers in the parking garage through a green-roof-mounted solar panel. The system includes:

- A grid-scale lithium-ion battery system (100 kWA/125 kWh)
- One electric vehicle level-3 direct current (DC) fast charger
- Six electric vehicle level-2 chargers
- A 3 kW green-roof-mounted solar photovoltaic panel
- Advanced controls

During a grid electricity outage, the system "islands" itself, disconnecting itself from the grid while the solar panel and battery sustain up to seven electric vehicle chargers. During regular operation, the battery is charged with the solar panel and from the grid during times of low electricity cost (and cleaner electricity generation) and discharges into the electric vehicles during times of higher electricity cost (and dirtier electricity generation). This strategy helps to reduce costs, carbon emissions, and the peak demand burden on the electricity system. It also provides an important emergency-preparedness system allowing for indefinite charging of electric vehicles during times when the grid may not be functioning. The YMCA of Greater Toronto is proud to host this important smart-grid and climate adaptation demonstration project.



## 03 Adapt to the Impacts of Climate Change *Environment & Infrastructure*

While climate change mitigation efforts such as reducing greenhouse gases are important, we are already experiencing the impacts of a changing climate. From extreme weather that damages property and infrastructure, to threatening outdoor activities we love, to impacts on food costs—climate change impacts affect every aspect of our lives. As frequently destructive weather and associated flooding are becoming the new normal, economic imperatives and legal liability considerations are driving adaptive action across sectors. Extreme weather events are costing Canadians hundreds of millions of dollars or more every year and requiring emergency-level responses to floods, fires and power outages. In 2013, Canadian insurance companies paid \$3.4 billion in payouts related to catastrophic events (mainly due to the floods in Calgary and Toronto). In 2016, this amount increased to \$5.03 billion. The Fort McMurray fire in May of 2016 alone resulted in \$3.7 billion in insured losses, making it the costliest natural disaster for Canadian insurers ever.<sup>4</sup>

Adapting to the impacts that are already being felt is both necessary and urgently required. Organizations like the YMCA of GTA have a role to play in protecting local communities and ensuring that they are prepared. Urban agriculture plays a small but critical role in communities underserved by high quality, affordable and fresh food. Urban farming provides opportunities for residents to engage in growing local produce, educates children about nutrition and offers training in food preparation, gardening and retailing skills. By offering young people jobs and providing formal horticulture training for community members, urban agriculture also provides opportunities for workforce development.

*YMCA of GTA will help our communities prepare for, adapt to and recover from the impacts of climate change.*

### Elements

1. We will reduce climate-related risks to local populations through the direct implementation of climate adaptation actions, such as preparing our facilities for increased extreme weather events through hard (e.g. water proofing, green roofing) and soft (e.g. operational policies) measures.
2. We will help to ensure energy reliability by supporting community energy planning, encouraging district energy and exploring how to effectively integrate solutions such as Combined Heat and Power.
3. We will improve community access to information for enhanced decision-making through better dissemination and making information more accessible. We will consider how to equip community



<sup>4</sup> Facts of the Property and Casualty Insurance Industry in Canada 2017, IBC, 2017, <[http://assets.ibc.ca/Documents/Facts%20Book/Facts\\_Book/2017/Fact-Book-2017.pdf](http://assets.ibc.ca/Documents/Facts%20Book/Facts_Book/2017/Fact-Book-2017.pdf)>

members with additional information on tools they and resources they can use to reduce the risks and impacts of disruptive climate change events and promote faster recovery.

4. We will continue to support community gardens and urban farms in the GTA, which promote local food security. Increasing the amount of food from the region will reduce greenhouse gas emissions from shipping food from far away, make our food system more resilient to climate change and other potential disasters, and create jobs locally and across the region.
5. We will seek to be part of the response to climate change impacts by acting as a safe space and helping to increase the capacity of accessible emergency shelters via our CRC program.

### Building on Progress to Date

- Assessment and design of energy resiliency measures such as Combined Heat and Power.
- Green roof at Central YMCA and Cooper Koo Family YMCA and launch of Green Team Strategy.
- Expansion of organic and urban farming, as well as addition of bee apiary and greenhouse at YMCA Cedar Glen.
- Vanauley Gardens west-end green space.
- Camp Pine Crest organic gardens.
- Farm stands at YMCA facilities, especially those in “food deserts” like Cooper Koo Family YMCA.
- Markham YMCA urban agriculture project.
- Over 200 childcare play places across the GTA.
- Brampton Union St. YMCA Green Terrace.
- Improving and adding additional green roof space Toronto Sheppard Ave., Mississauga Burmanthorpe Rd. YMCA Centre and Scarborough Town Centre Ct.
- Metro Hall training and employment program and food strategy.

#### ***SPOTLIGHT: YMCA Cedar Glen Outdoor Centre***

The YMCA Cedar Glen Outdoor Centre welcomes outdoor education, retreat and conference groups, offering meals, overnight accommodations, meeting facilities and a variety of outdoor experiential education programs. Day camp runs during the summer and school breaks. This centre includes a robust educational component for children and utilizes a hands-on teaching environment incorporating the site’s certified organic farm, bee apiary and greenhouse. The produce is sold at a number of our urban centres of community. This initiative supports local organic agriculture while reducing greenhouse gas emissions from traditional agriculture and transportation of perishables from long distances, while developing local agriculture skills in our youth.





## 04 Improve Health and Well-Being *Health & Well-Being*

Climate change has significant impacts on communities, presenting increasing risks to food security, water availability, infrastructure and human health. The World Health Organization has stated that climate change will be the defining issue for health systems in the 21<sup>st</sup> century, interacting with all Social Determinants of Health. For instance, it estimates more than 7 million annual deaths worldwide can be attributed to air pollution. Records for extreme weather events such as droughts and floods, storm surges, heat waves and wildfires are being routinely broken, impacting human lives, property and livelihoods. The urban “heat island” effect, where built up areas are hotter than nearby rural areas due to human activities, can affect communities by increasing air pollution, heat-related illness and mortality, and threats to water quality.

Climate change is also contributing to a rise of infectious diseases, mass displacement and violent conflict. Changes in temperature, precipitation and humidity will increase risks of disease transmission,



including vector-borne diseases such as malaria and Lyme disease. Rising sea levels and extreme weather events will leave certain regions uninhabitable. Shortages in food, fresh water and energy will also force communities to migrate and could exacerbate conflict in existing conflict zones.<sup>5</sup> Hundreds of millions of people could be on the move in the coming decades due to the impacts of climate change.

One of the YMCA of GTA’s central mandates is to help foster resilient individuals, with a focus on the most vulnerable citizens and underserved

populations. It creates the healthy communities that care for and cultivate healthy individuals. Climate change permeates the YMCA of GTA’s mandate as it presents serious risks to our health and communities.

*YMCA of GTA will promote health and well-being within the context of a changing climate.*

### Elements

1. We will continue to focus on building healthy communities through the Social Determinants of Health framework. We will focus on healthy child development, as well as healthy living through our health and fitness, aquatics, employment, housing, youth development, education and training, camp programs, and other program areas. We will explore opportunities to share information and provide education on the health impacts of climate change to enable better decision-making on behalf of governments and individuals.
2. We will work to ensure that people have access to the basic resources necessary to survive

<sup>5</sup> <http://www.lopparl.gc.ca/content/lop/ResearchPublications/2010-04-e.htm#a4>

(including food, water and sanitation, energy, and shelter) in times of crisis.

3. We will work to improve air quality and temperature control by implementing solutions such as green roofs, reducing the urban heat island effect and inspiring others to follow our lead.
4. We will continue to create environments that encourage residents of the GTA to be physically active and engage with nature, such as day camps and green roofs. People are more likely to exercise and be active when they have quality, affordable and accessible recreational facilities such as city parks and other safe, public spaces.
5. We will cultivate a connection between nature and our youth through outdoor education and day camp programs. Such programs will instill a sense of environmental stewardship and a connection to nature that will improve physical and emotional health and foster responsible decision-making in their futures.

### Building on Progress to Date

- Community Health Monitoring Framework.
- Enriching and expanding natural playgrounds.
- Green cleaning products.
- Improving community fitness and health through programming including personal training, swimming and aquatics, group fitness classes, sports and recreation, fitness certification courses, children's programs, day camps, outdoor education, summer club and family camp programs.
- At YMCA Cedar Glen, continuing to implement our Forestry Master Plan, which includes removing and managing forests and invasive species, as well as integrated forest management in partnership with the Humber College Arboriculture program.

#### ***SPOTLIGHT: YMCA Community Health Monitoring Framework***

In collaboration with the Social Research and Demonstration Corporation (SRDC), the YMCA of GTA has developed a Community Health Monitoring Framework (CHMF) to improve its understanding of:

- the contribution that YMCA programs and services make to the health of members, clients and other residents of the neighbourhoods it serves
- emerging health needs that can inform decisions about current and future programming and service provision
- the current reach of YMCA services in relation to health needs (e.g., to assess the extent to which we are reaching those who are most in need of our services)

The CHMF incorporates the Urban Heart @Toronto and Canadian Index of Well-Being frameworks but is tailored to the YMCA's focus on the healthy development of children, youth and young adults across the GTA. It tracks and analyzes 32 indicators across 7 domains and covers the entire GTA. Initial reporting on indicators and knowledge mobilization under the CHMF is expected in early 2018.





## 05 Support and Integrate Vulnerable Populations

### Society & Economy

A climate-resilient GTA will draw on the strengths of our diverse communities and geographies – including newcomers, our Indigenous communities, at-risk populations and youth – to pursue our shared interests, embrace our differences and be stronger together. A climate-resilient community is one that emphasizes social inclusion and offers opportunity, dignity and security for all.

Women, children, people in poverty and those with disabilities are some of the most vulnerable populations in the GTA and are more likely to be seriously impacted by climate change. Moreover, rising sea levels and extreme weather events will leave certain regions shortages in food, fresh water and energy will also force communities to migrate. As “geographical winners” Canada and the GTA in particular will continue to be desirable locations for those looking to escape hardships and build a better life. We can and should plan for a potential influx of immigrants and refugees due to climate and other impacts. Climate change will therefore be the source of additional pressure on Canada’s humanitarian immigration program in the coming decades. Community organizations have an opportunity now to plan an orderly and effective response to the potential influx.



YMCA of GTA can offer a safe haven for a wide range of community members, promoting social stability and cohesion by welcoming and helping to integrate members of society who have been displaced by climate change or are most vulnerable to its impacts.

*YMCA of GTA will work to ensure that the populations most vulnerable to climate change impacts are well cared for and help newcomers who may have been displaced by climate-related events integrate into GTA communities.*

### Elements

1. We will continue to focus on supporting vulnerable populations, applying the Social Determinants of Health framework. We will focus on economic opportunities and income through our employment programs, housing options for the most vulnerable and supporting newcomers in the integration process.
2. We will support newcomers who may have migrated due to climate impacts or displacement through our information and referral services, language assessment, newcomer youth programs and employment services.



3. We will help to create a sense of collective identity and mutual support and build new community networks while strengthening existing ones. This includes building a sense of local identity, social networks and safe spaces; promoting features of an inclusive local cultural heritage; and encouraging cultural diversity while promoting tolerance and a willingness to accept other cultures. This will help provide the community infrastructure that fosters social cohesion, equality opportunity and livability.
4. We will encourage young adults to lead socially and environmentally responsible lives and prepare them to succeed in their chosen careers by engaging them in service training, travel exchanges and work experience related to the clean energy economy. Through our Youth Leadership Program and Newcomer Youth Leadership Development Program (NYLD), we will engage young people to reduce greenhouse gas emissions, inspire a passion for sustainability and service, stimulate the demand for green services and create ladders to careers in the green economy for young people living in poverty.

### Building on Progress to Date

- Youth Leadership Program.
- Newcomer Youth Leadership Development Program.
- Syrian refugee re-settlement initiatives.
- Employment services.
- Immigration services.
- Career planning and development.
- Youth substance abuse programs.
- YMCA Academy High School.

#### ***SPOTLIGHT: YMCA of GTA's Youth Leadership Program and Newcomer Youth Leadership Development Program***

YMCA of GTA offers a number of programs that support vulnerable populations such as youth and newcomers in cultivating skills, integrating into new cultures and contributing to their communities through employment or volunteering. The Y's Youth Leadership Program (YLD) trains and teaches youth how to take responsibility in their communities. Designed especially for youth between 11 and 18 years old, the program YLD combines leadership training, teamwork, self-government, and volunteer placement to help build confidence – and connections. Meanwhile, the Newcomer Youth Leadership Development (NYLD) program is designed to help newcomer youth and parents have a positive settlement experience. Participants gain volunteer experience, learn about Canadian culture and society and improve their English. The NYLD offers a safe, supportive environment to build leadership, teamwork and social skills while also making new friends and learning about their new home in the GTA.





## 06 Work with Government to Better Serve the Community

### Leadership & Strategy

A community's infrastructure, design and neighborhoods are driven by public investments and land use decisions. Choices made today will last for generations. These choices must also be considered on multiple scales and across issues and systems. Facing a future with so much uncertainty around climatic variation and the shift to a lower-carbon world will ultimately require flexible and adaptive systems that do not lock our communities into a single pathway. Policymakers and local governments are vital in establishing the right incentives and early-warning systems that can reach at-risk populations before, during and after disasters strike.

Community organizations like the YMCA of GTA understand the local level very well and have skill sets that compliment those of local governments. The YMCA is a trusted partner of government, with strong working relationships with the City of Toronto and other local municipalities. It could leverage these relationships to support government efforts to integrate climate change risks into planning and policymaking processes.



*YMCA of GTA will help to embed climate resilience into operations and systems by supporting governments in integrating climate change into planning and policymaking.*

### Elements

1. We will encourage capable leadership and effective urban management within government and civil society, particularly during an emergency. This involves strong leadership, cross-sector communication and evidenced-based decision-making.
2. We will support governments in integrating climate change risks into planning and policymaking by advocating for progressive policies and modeling climate-smart behaviours. We will encourage local governments to use the best available scientific knowledge and updated climate projections to inform its policy, as well as best practices in climate indicators and monitoring protocols.
3. We will engage the community and encourage participation in helping the GTA better articulate the long-term, climate change-related goals it will work to achieve in serving the community, using high-tech and low-tech engagement technologies, including through the Smart City Challenge, which focuses on data and connected technology to achieve solutions.
4. We will empower a broad range of stakeholders by ensuring that community members are well informed, capable and involved in their community's climate change action planning. This includes access to information and education, communication between the government and public, knowledge transfer, and timely and appropriate monitoring.



5. We will train tomorrow's leaders through our Youth Leadership Program and NYLD program. We will instill a sense of social responsibility and environmental stewardship in those who will grow up and take on governance and policymaking roles in our community.

### **Building on Progress to Date**

- Low-carbon building material analysis supported by TAF for future YMCAs.
- Resilience partnership with City of Toronto and other local partners.
- TAF funding for energy efficiency.
- City of Toronto financing for energy efficiency in Building (SEPF).
- Received awards for leadership and being among Canada's Greenest Employers.

#### ***SPOTLIGHT: Life-Cycle Analysis and Sustainable Energy Plan Financing***

The YMCA of GTA has a long history of working with government on various fronts to strengthen communities across the GTA. Recent innovative examples on environmental and sustainability initiatives include a research project funded by The Atmospheric Fund to examine options for environmentally friendly construction materials in future YMCA construction, including materials with lower carbon footprints. Additionally, the Y is working with the City of Toronto's Environment and Energy Division, Energy Efficiency Office, on a joint program to initiative energy efficiency projects across the Y's Toronto portfolio. This program, combined with other Y initiatives, has led to nearly a 40% reduction in greenhouse gas emissions since 2008.





## 07 Catalyze Innovation and Private Sector Action

### Environment & Infrastructure

Community organizations committed to climate resilience are already actively collaborating with governments, resilience experts and one another, but service providers and investors from the private sector will be required to bridge the gap between current capacities and what they need to thrive in the 21st century.

Many climate and resiliency solutions struggle with inadequate access to capital and financing for identified high-impact projects. As such, private sector involvement, more creative and forward-looking risk management and insurance options and innovative approaches to financing such projects are in greater demand than ever. Community organizations like the YMCA can help by forging strategic partnerships with leading private sector actors, piloting new technologies and bridging the gap between government incentives and innovative solutions.



*YMCA of GTA will help to accelerate climate-resilient action in the private sector by setting an example and building strategic partnerships to pilot innovative solutions.*

### Elements

1. We will model climate-smart behaviours through strategic projects and partnerships with private sector actors. YMCA of GTA can implement innovative climate-smart initiatives such as clean energy, new green developments and life-cycle analysis and promote these initiatives to inspire behavioural change in others. We will work to create trust in and momentum related to new and promising technologies through pilot projects and by acting as a “first buyer” and/or collaborator, where appropriate.
2. We will be a first mover by conducting an organization-wide climate change risk and opportunity assessment in our organization, calculating the avoided climate-related costs and sharing information on the return on investment for various climate-smart actions. We will also look at the preparedness of certain locations, conducting assessments at the facilitate level and working to make our operations as low-risk as possible. We will share relevant documents, processes and lessons learned with other businesses and organizations.
3. We will integrate climate change information into our public reporting, including whether and how the YMCA of the GTA is exposed to climate-related risks, what strategies the organization is implementing to manage or address those risks and what opportunities climate change has presented the organization.
4. We will transition our business model to align with the low-carbon economy. We will develop, maintain and communicate effective procedures, standards and guidelines for our business activities to learn from and educate our staff, volunteers, members and stakeholders about environmental and climate change issues through the use of “green teams.”



5. We will work to bridge government incentives to private sector innovation by acting as a conduit of information and funding relevant to climate change initiatives.

### **Building on Progress to Date**

- Innovative pilot project at Cooper Koo Family YMCA showcasing electric vehicle charging, battery power and solar panel-based micro-grid implementation.
- PowerBarr at Toronto Central Grosvenor St, a portable solar charger for mobile devices.
- Energy Consumption Audits and Energy Conservation Study.
- Early mover to install electricity harmonizer technology through TAF financing.
- Global Reporting Initiative (GRI) Sustainability reporting.
- Formal employee Green Team.
- Canadas Greenest Employers.
- Formal Green Strategy/Policy Statement.
- 2020 goals for natural spaces, water consumption and CO<sub>2</sub> emissions.
- 2040 goal of carbon neutrality.
- Roof-mounted solar PV at Markham YMCA.

#### ***SPOTLIGHT: GRI Sustainability Reporting***

The YMCA of Greater Toronto is undergoing a sustainability reporting initiative conforming with the Global Reporting Initiative Standards that are considered by many as the global best practice in sustainability reporting and is followed by the world's largest organizations. Sustainability reporting or use of GRI Standards are not mandatory; however, the intention of such practice is to align organizational strategies and actions to a sustainable global economy. Only two percent of all worldwide sustainability reports published in 2015 came from the not-for-profit sector and only eight were from North America (all of which were based in the U.S.). By adopting sustainability reporting in accordance with the GRI Standards, YMCA of GTA will report on its sustainability leadership in its sector, globally and domestically, and can serve as an example for further adoption of such practice in the private sector.





## 08 Build Regional Resilience *Leadership & Strategy*



Identifying solutions that match the scale of the challenges we face requires regional coordination.

Regional coordination has the potential to increase the reach of good ideas and increase the influence of community concerns and needs. The strength of each neighborhood is essential for the strength of the region, and vice versa. Because communities are interdependent and frequently share resources, each one stands to benefit when the region as a whole becomes more resilient.

The GTA is made up of a multitude of communities, each with its own character, cultural mix and set of advantages and obstacles. But each of these communities also share many qualities in common, including the physical, social, environmental and economic challenges that a climate resilience strategy is designed to address. YMCA of GTA is uniquely positioned to support regional climate resilience and a coordinated response across the GTA.

*YMCA of GTA will take advantage of its regional network to support regional resilience.*

### Elements

1. We will continue to foster partnerships with climate resilience leaders in the region, including the City of Toronto and the myriad of local resilience champions in our community.
2. We will explore opportunities to advance regional coordination, including partnering with local communities and organizations to share lessons learned in climate resilience planning.
3. We will cultivate a regional network of resiliency hubs and accessible emergency shelters via our CRC program.
4. We will seek to improve the rate of volunteerism for responding to climate-related events. We will also work to connect organizations and programs in need of support with available volunteers, including linking volunteers with emergency response and recovery efforts.

### Building on Progress to Date

- Camp and leadership programming including showcasing sustainability and urban farming at YMCA Cedar Glen.
- Various program and training initiatives implemented across the region.
- Sharing information and successes among municipal partners and across YMCA networks throughout, Ontario, Canada, North America and globally.



***SPOTLIGHT: Community Resiliency Partnership with City of Toronto and Beyond***

The YMCA of GTA is developing and implementing a Community Resiliency Strategy. The strategy started off with a partnership with the City of Toronto to increase the YMCA of GTA's role as emergency response centres and resiliency hubs but the strategy has since expanded beyond the city boundaries. One major component of this is to enable our Centres of Community to function as reception and community response centres in the event of extended power failures, extreme weather or other high impact events. To realize this, we are currently exploring opportunities to roll-out a comprehensive program that would build regional resilience through continuing to reduce our energy demand, installing solar panels, energy storage, and electric vehicle charging stations throughout our network, and upgrading our energy systems to function with high efficiency combined heat and power systems which would allow our facilities to continue functioning throughout extended power failures.



# Appendix A: Next Steps Towards Implementation of YMCA Resiliency Strategy

## Implementation Plan Steps

Step 1: Organizational Resiliency Mapping.

- Identify and discuss with internal stakeholders to understand what related programs, activities and roles currently exist that intersect with the goals of this Climate Resiliency Strategy
  - Youth leadership development (YLD/NYLD),
  - Facilities Management
  - Health and Fitness/Centres of Communities (warming and cooling)
  - Human Resources
  - Etc...
- Identify and discuss with select external stakeholders to understand how they will be impacted or could impact the implementation of this strategy.
  - Library,
  - Emergency Management Office
  - Etc..
- Map current understanding of internal and external interactions with Priority Actions and goals in briefing format

Step 2: Articulate how Priority Actions are currently being supported and potential additional steps to ensure success.

Step 3: Annual review and revisions to the strategy and related plans. Periodic review to resiliency strategy goals and elements as more and new information becomes available.



## Appendix B: Key Resources

- 100 Resilient Cities' City Resilience Framework  
<[http://lghhttp.60358.nexcesscdn.net/8046264/images/page/-/100rc/Blue%20City%20Resilience%20Framework%20Full%20Context%20v1\\_5.pdf](http://lghhttp.60358.nexcesscdn.net/8046264/images/page/-/100rc/Blue%20City%20Resilience%20Framework%20Full%20Context%20v1_5.pdf)>
- Well Building Institute
- Multiple City Resiliency Strategies
- AECOM Resiliency Framework
- Ontario Climate Change Strategy
- FCM Partners for Climate Protection - Climate Change Mitigation Milestone Framework  
<http://www.fcm.ca/home/programs/partners-for-climate-protection/milestone-framework.htm>
- ICLEI's Changing Climate, Changing Communities: Guide and Workbook for Municipal Climate Adaptation <<http://climate-adapt.eea.europa.eu/metadata/guidances/changing-climate-changing-communitites-guide-and-workbook-for-municipal-climate-adaptation>>

