

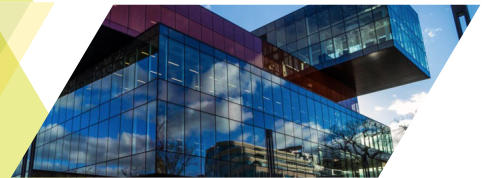


FEDERATION  
OF CANADIAN  
MUNICIPALITIES

FÉDÉRATION  
CANADIENNE DES  
MUNICIPALITÉS

# Municipalities for **Climate Innovation** Program

Maturity Scale for  
Municipal GHG  
Emissions Reduction



# Table of Contents

<b>Maturity Scale for Municipal GHG Emissions Reduction</b> .....	1
How do I use this maturity scale? .....	1
Purpose of the Maturity Scale for Municipal GHG Emissions Reduction .....	1
Completing the self-assessment. ....	2
<b>Glossary</b> .....	7

The Municipalities for Climate Innovation Program is a new five-year, \$75-million program designed to encourage Canadian municipalities to better prepare for and adapt to the new realities of climate change as well as reduce greenhouse gas emissions. The program is delivered by the Federation of Canadian Municipalities and funded by the Government of Canada.

Canada 

# Maturity Scale for Municipal GHG Emissions Reduction

This maturity scale was developed with support from FCM's Municipalities for Climate Innovation Program (MCIP) to facilitate the self-assessment of your organization's institutional readiness and progress in reducing greenhouse gas (GHG) emissions. The scale is based on the milestone framework for the Partners for Climate Protection (PCP) program and FCM's understanding of the processes needed to incorporate GHG emissions reduction into municipal operations and strategy.

Existing members of the PCP program may also benefit from using this framework to further assess their progress in climate change action. If your municipality is interested in joining the PCP program and accessing the program's available resources to help with GHG emissions reduction, please email [pcp@fcm.ca](mailto:pcp@fcm.ca).

## How do I use this maturity scale?

This scale is intended to help your municipality rapidly identify areas of potential improvement across three competencies:

- **Policy:** Putting in place context-specific policies that support the implementation of a vision to reduce local GHG emissions.
- **Human resources and governance:** Ensuring staff and council are equipped with the mandate, understanding, skills and knowledge needed to increase capacity for reducing municipal GHG emissions.
- **Technical and risk:** Preparing the tools needed to reduce GHG emissions and track progress.

Each competency within the Maturity Scale for Municipal GHG Emissions Reduction is broken down into five milestones, as per the PCP Milestone Framework. These milestones form a progressive scale from initial concept through to continuous improvement of GHG emissions reduction in municipal processes. The outcomes for each milestone show, in practical terms, what your municipality needs to achieve before progressing to the next level.

Your municipality is expected to progress from planning to implementation during the time span of your MCIP-funded initiative, at a pace that corresponds to your particular needs, size and available resources. Your municipality will be required to complete a self-assessment at the beginning of your FCM-funded initiative or technical assistance activity (this will serve as the baseline) and again following its completion.

## Purpose of the Maturity Scale for Municipal GHG Emissions Reduction

The Maturity Scale for Municipal GHG Emissions Reduction was designed to serve the following purposes:

1. **To help municipalities assess where they are in their organizational integration of GHG emissions reduction:** The scale allows municipalities to self-assess their level of maturity across the three competencies mentioned above, at both the beginning and completion of their MCIP-funded initiative. It also provides a framework for municipalities that are PCP members to assess their overall progress.
2. **To help FCM assess where municipalities are on the climate adaptation spectrum:** The self-assessment provided by municipalities will help FCM better understand their progress in advancing through the various levels as they access FCM funding or participate in technical assistance activities.
3. **As a reporting tool for FCM:** FCM will review self-assessments at the beginning and end of MCIP-funded initiatives, and will use the findings to report to the federal government on improvements in municipal capacity to reduce GHG emissions.

## Completing the self-assessment

Below are resources you can consult to help complete the self-assessment exercise. These are not requirements but suggested sources of information.

Municipalities often approach GHG emissions reduction in corporate operations separately from community-wide action. Depending on how your municipality has approached the issue, you may opt to complete one self-assessment that takes into account both streams combined, or instead prepare separate self-assessments for each stream.

Competency	Supporting documents and information (as applicable)
<b>Policy</b>	<ul style="list-style-type: none"> <li>• Council resolution</li> <li>• Climate change policies or plans or other official plans integrating GHG reduction</li> <li>• Progress and monitoring reports related to climate change (note: these may be similar to PCP Milestone 4 and Milestone 5 reports)</li> <li>• Studies on climate change mitigation</li> </ul>
<b>Human resources and governance</b>	<ul style="list-style-type: none"> <li>• Changes related to the municipal organizational chart, or to the staff roles and responsibilities</li> <li>• Reports on awareness campaigns (e.g. for staff, council or residents)</li> <li>• Information on staff or specific council members dedicated to climate change issues (e.g. council steering committee on climate change)</li> <li>• Community partnership framework, charter or other resources that capture community participation in climate change</li> </ul>
<b>Technical capacity</b>	<ul style="list-style-type: none"> <li>• Any resources created or used internally to deal with climate issues (e.g. tools, data, spreadsheets, guides, websites, maps, energy/emissions inventories, etc.)</li> <li>• Emissions reduction protocols or standards used</li> <li>• Progress reports submitted to other reporting bodies (e.g. PCP, carbonn<sup>®</sup> Climate Registry, CDP, provincial governments, etc.)</li> <li>• Documented initiatives that were implemented to reduce GHG emissions, including processes, practices, projects, etc.</li> <li>• Information on data used by the municipality (e.g. origins, collection practices, etc.) and quality control practices</li> </ul>

**Competency: Policy**

*Putting in place context-specific policies that support the implementation of a vision to reduce local GHG emissions.*

Maturity level →	Concept Level		Milestone 1		Milestone 2		Milestone 3		Milestone 4		Milestone 5	
	Working on Concept Level	Completed Concept Level	Working on Milestone 1	Completed Milestone 1	Working on Milestone 2	Completed Milestone 2	Working on Milestone 3	Completed Milestone 3	Working on Milestone 4	Completed Milestone 4	Working on Milestone 5	Completed Milestone 5
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	We have defined expectations for improving our capacity to reduce GHG emissions. We are aware of applicable provincial/territorial requirements and available resources to support our efforts.		We have a GHG emissions inventory in place, which was mandated.		We have set our GHG emissions reduction target, which has been informed by targets set by relevant stakeholders.		We have developed a local action plan to guide emissions reduction in our municipality.		We are implementing the GHG emissions reduction activities in our local action plan.		We are continually monitoring progress in our GHG emissions reduction activities and reviewing opportunities for improvements in our local action plan and municipal processes.	
Outcomes	You have completed a specific milestone when you can demonstrate evidence of the outcomes below.											
Policy and objectives	<input type="checkbox"/> We have defined objectives for our GHG emissions reduction activities.		<input type="checkbox"/> N/A		<input type="checkbox"/> We have set an emissions reduction target.		<input type="checkbox"/> We have prepared a local action plan that outlines specific activities we will engage in to reduce emissions through municipal operations or in the wider community. <sup>1</sup>		<input type="checkbox"/> We are implementing GHG reduction initiatives identified in our local action plan, as per our implementation schedule.  <input type="checkbox"/> There are clear links between our local action plan and our municipal planning documents.		<input type="checkbox"/> We have processes in place to regularly review our local action plan, assess progress against targets and make adjustments.  <input type="checkbox"/> Consideration of the emissions target is integrated into other guiding municipal plans and policy decisions.	
Alignment with broader policy context	<input type="checkbox"/> We have reviewed any applicable provincial/territorial requirements for climate change action.		<input type="checkbox"/> N/A		<input type="checkbox"/> Our target has been informed by targets set by adjacent municipalities, our provincial/territorial government, or the Government of Canada.		<input type="checkbox"/> Our local action plan considers any regulatory requirements by our provincial government.		<input type="checkbox"/> We are seeking ways to align the steps in our local action plan with those of neighbouring municipalities, upper-tier municipalities, community partners, and the provincial/territorial government.		<input type="checkbox"/> We are reporting progress to relevant bodies outside of our municipality, for knowledge-sharing purposes (e.g. provincial/territorial government, PCP program, etc.).	

<sup>1</sup> Some municipalities may choose to produce two separate local action plans — one that is focused on municipal operations and another for the wider community. FCM recommends focusing first on municipal operations.

**Competency: Human resources and governance**

Ensuring staff and council are equipped with the mandate, understanding, skills and knowledge needed to increase capacity for reducing municipal GHG emissions.

Maturity level →	Concept Level		Milestone 1		Milestone 2		Milestone 3		Milestone 4		Milestone 5	
	Working on Concept Level <input checked="" type="checkbox"/>	Completed Concept Level <input type="checkbox"/>	Working on Milestone 1 <input type="checkbox"/>	Completed Milestone 1 <input type="checkbox"/>	Working on Milestone 2 <input type="checkbox"/>	Completed Milestone 2 <input type="checkbox"/>	Working on Milestone 3 <input type="checkbox"/>	Completed Milestone 3 <input type="checkbox"/>	Working on Milestone 4 <input type="checkbox"/>	Completed Milestone 4 <input type="checkbox"/>	Working on Milestone 5 <input type="checkbox"/>	Completed Milestone 5 <input type="checkbox"/>
	We have assigned staff members to lead our GHG emissions reduction work and have the support of council to begin.		We have assigned dedicated staff to develop and maintain a GHG emissions inventory, prepared with input from relevant stakeholders.		Our GHG emissions reduction target has been approved by council.		Our local action plan has been approved by council and informed by relevant municipal and community stakeholders.		Our dedicated staff are implementing our GHG emissions reduction activities and are providing regular progress reports to our governance body or authority.		Our dedicated staff are continually monitoring progress in our GHG emissions reduction activities and reviewing opportunities for improvement.	
Outcomes												
You have completed a specific milestone when you can demonstrate evidence of the outcomes below.												
Governance	<input type="checkbox"/> The high-level value proposition for GHG emissions reduction is known and accepted. <input checked="" type="checkbox"/> We have a council resolution to join the PCP Program (if applicable).		<input checked="" type="checkbox"/> We have the support of council and senior management to work on GHG emissions reduction.		<input type="checkbox"/> Our emissions reduction target has been approved by council.		<input type="checkbox"/> A governance body or authority has been identified, that will monitor the implementation of our GHG emissions reduction initiatives.  <input type="checkbox"/> Our local action plan for municipal and/or community-wide emissions reduction has been approved by council.		<input type="checkbox"/> We provide regular progress reports to our governance body or authority.  <input type="checkbox"/> We are integrating our emissions reduction targets and objectives into municipal decision-making processes.		<input type="checkbox"/> Council understands the co-benefits of municipal GHG emissions reduction and supports continuous improvement to our local climate change work.  <input type="checkbox"/> Council and department heads have a process in place to consider emissions reduction in all applicable investment and policy decisions.	
Roles and responsibilities	<input checked="" type="checkbox"/> We have established an inter-departmental climate team <sup>2</sup> to prepare our GHG emissions inventory.		<input type="checkbox"/> Our inter-departmental climate team members <sup>2</sup> have received any necessary training for compiling and analyzing data in our GHG emissions inventory.		<input type="checkbox"/> We have consulted with municipal departments and local organizations that are in a position to reduce GHG emissions.  <input type="checkbox"/> We have tasked relevant municipal departments and local organizations with developing parts of the local action plan that relate to the activities they will be undertaking.		<input type="checkbox"/> Roles and responsibilities for implementing GHG emissions reduction activities are clearly defined.  <input type="checkbox"/> There is ownership within relevant municipal departments and local organizations of specific activities identified in our local action plan.		<input type="checkbox"/> The municipal departments and local organizations identified in our local action plan are implementing their respective GHG emissions reduction activities.		<input type="checkbox"/> We continue to review and revise roles and responsibilities to ensure longer-term sustainability in our GHG emissions reduction efforts.	

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<b>Stakeholder engagement</b>	<input checked="" type="checkbox"/> We are engaging with the public and relevant community groups to inform our GHG emissions inventory.	<input type="checkbox"/> We have established relationships with utilities for ongoing access to data to inform our inventories.	<input type="checkbox"/> We have engaged the public and relevant community groups in defining our emissions reduction target.	<input type="checkbox"/> We have engaged the public and relevant community groups to inform our local action plan for the community.	<input type="checkbox"/> We have engaged relevant community groups to implement our local action plan for the community.	<input type="checkbox"/> We regularly engage with stakeholders to recognize their efforts, share our joint successes, and build new partnerships to improve our approach to GHG emissions reduction.
	<input type="checkbox"/> We have actively engaged our relevant utilities for data gathering and alignment of efforts.					<input type="checkbox"/> Our progress reports are regularly made available to the public.

<sup>2</sup> It is recognized that in smaller municipalities, only one person may be tasked with preparing a GHG emissions inventory. In some cases, municipalities may also choose to engage external stakeholders to carry out this work.

**Competency: Technical capacity**

Preparing the tools needed to reduce GHG emissions and track progress.

Maturity level →	Concept Level		Milestone 1		Milestone 2		Milestone 3		Milestone 4		Milestone 5	
	Working on Concept Level	Completed Concept Level	Working on Milestone 1	Completed Milestone 1	Working on Milestone 2	Completed Milestone 2	Working on Milestone 3	Completed Milestone 3	Working on Milestone 4	Completed Milestone 4	Working on Milestone 5	Completed Milestone 5
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	We are gathering the data we need to begin preparing a GHG emissions inventory.		We have completed our municipal and community-wide GHG emissions inventory.		Our GHG emissions reduction target has been approved by council.		We have used our available data and future forecast to set a GHG emissions reduction target.		We are using our tools and systems to track the performance of our GHG emissions reduction activities.		We continuously improve our approach to performance measurement and reporting of our GHG emissions reduction.	
Outcomes	You have completed a specific milestone when you can demonstrate evidence of the outcomes below.											
Data and performance management	<input type="checkbox"/> We are connected to relevant technical support organizations that can help us through the process. <input checked="" type="checkbox"/> We are identifying relevant data sources and compiling available data for our emissions inventory.		<input type="checkbox"/> We have completed a municipal and community GHG emissions inventory. <sup>3</sup> <input type="checkbox"/> We are tracking data sources and any assumptions that we are making about available data. <input type="checkbox"/> We have completed a forecast of future GHG emissions, based on a business-as-usual scenario. <sup>4</sup>		<input type="checkbox"/> We are using available data and our forecast of future GHG emissions reductions to inform the development of our local action plan. <input type="checkbox"/> We have considered several emissions reduction targets, balancing ambition with feasibility.		<input type="checkbox"/> We have identified opportunities for emissions reduction and have quantified them.		<input type="checkbox"/> We are monitoring the performance of the initiatives that are we implementing through the local action plan. <input type="checkbox"/> We have processes in place to identify new opportunities for emissions reduction.		<input type="checkbox"/> We continually seek improvements in data quality to support the GHG emission reduction action plan. <input type="checkbox"/> We have processes in place to regularly review our approach to monitoring and performance measurement.	

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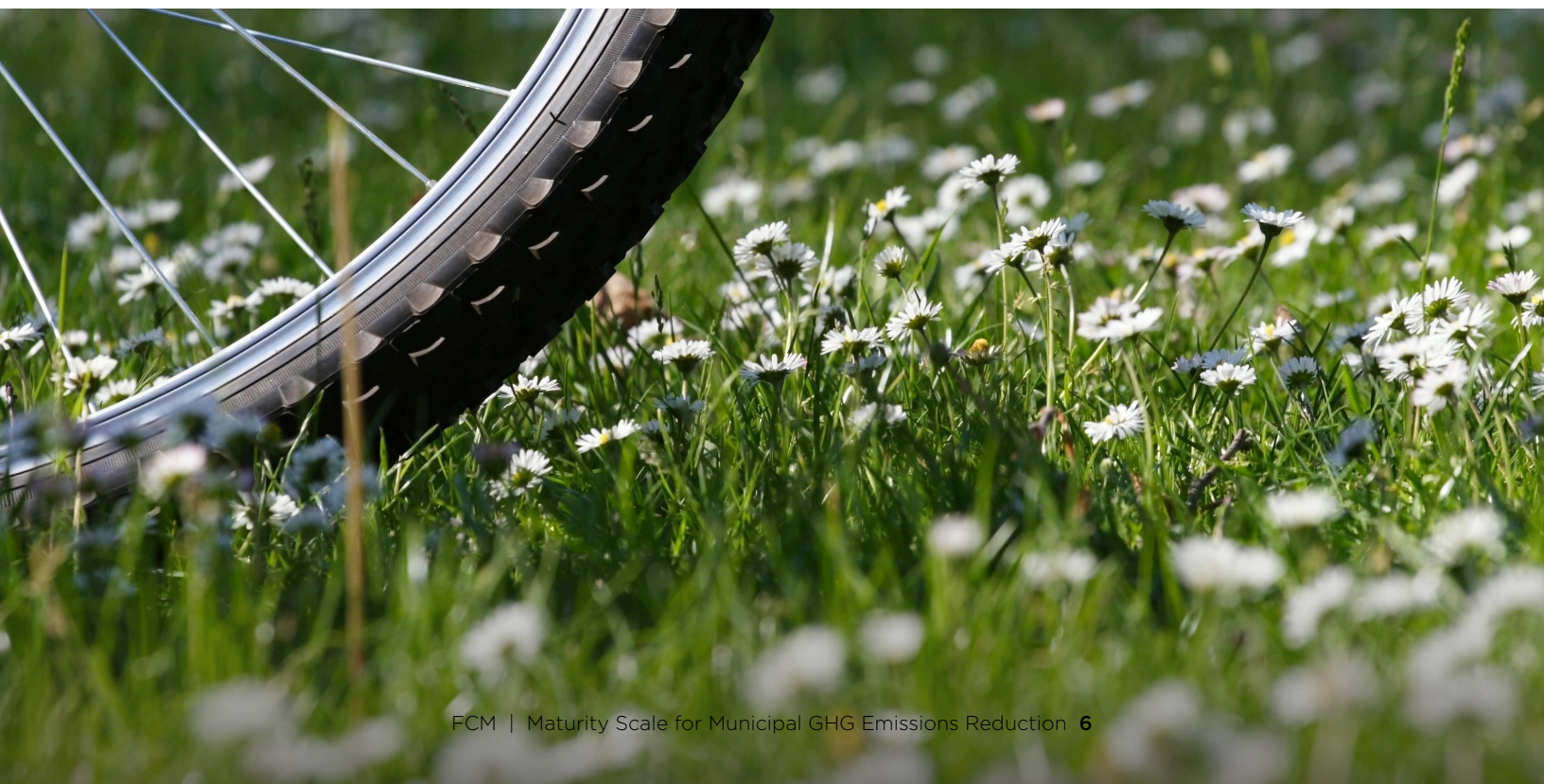
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<b>Technical tools</b>	<input checked="" type="checkbox"/> We are exploring suitable tools and systems for our GHG emissions inventory. <input checked="" type="checkbox"/> We are becoming familiar with the protocols and research that will enable our actions to achieve the milestones.	<input type="checkbox"/> We have secured an appropriate tool for cataloguing our GHG emissions inventory. <sup>5</sup>	<input type="checkbox"/> The reduction targets have been informed by technical analysis of the types of actions required to achieve them.	<input type="checkbox"/> Tools and systems are in place to track progress in our GHG emissions reduction.	<input type="checkbox"/> We are monitoring the effectiveness of our tools for tracking GHG emissions reduction.	<input type="checkbox"/> We continually improve our tools and systems for tracking GHG emissions reduction.
<b>Economic considerations</b>	<input type="checkbox"/> We have allocated funding for acquiring relevant data, technical tools and systems.	<input type="checkbox"/> Our inventories consider GHG emissions and energy consumption alongside associated financial expenditures on energy.	<input type="checkbox"/> We are assessing costs related to achieving the identified GHG emissions reduction targets.	<input type="checkbox"/> We are assessing costs related to identified GHG emissions reduction actions. <input type="checkbox"/> We have allocated annual funding and, where needed, confirmed other funding sources to support prioritized activities described in our local action plan.	<input type="checkbox"/> We are assessing the value for money along with energy savings from identified projects. <input type="checkbox"/> We are dedicating funding in our annual budget and capital plans to the implementation of activities outlined in our local action plan.	<input type="checkbox"/> Our priority GHG emissions reduction activities are fully funded and we have processes in place to assess new emissions reduction opportunities.

<sup>3</sup> The inventory should clearly indicate emission intensity values or coefficient values for all energy types (including electricity).

<sup>4</sup> PCP recommends generating a forecast for the next 10 years.

<sup>5</sup> PCP recommends using the PCP Milestone Tool.





# Glossary

For a full list of terms and acronyms used in FCM resources and application forms, please visit the [FCM website](#).

## Capacity building

The process by which people, organizations and society develop their capacities over time to achieve social, economic and environmental goals, including through improvement of knowledge, skills, systems and institutions.

## Climate change

A change in the state of the climate that can be identified by changes in the mean or variability of its properties and that persists for an extended period — typically decades or longer.

## Governance

Governance determines who has power and accountability, who makes decisions, and how other players make their voices heard.

## Greenhouse gas (GHG)

The atmospheric gases responsible for causing climate change. The major GHGs are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). Less prevalent, but very powerful, GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>).

## Implementation

The act or process of putting a plan or decision into action or effect; starting to use something; execution.

## Infrastructure

Basic physical and organizational structures and facilities (e.g. buildings, roads, sewer network, treatment plants, etc.) needed for operation.

## Integrated

A state of alignment and communication between systems, sectors and institutional processes that promotes consistency in decision-making and facilitates more rapid responses by enabling systems to function collectively and achieve common outcomes.

## Inventory

A greenhouse gas (GHG) emissions inventory brings together data on community and municipal energy use and solid waste generation to estimate GHG emissions in a given year. The forecast projects future emissions based on assumptions about population, economic growth and fuel mix.

## Life-cycle cost analysis (LCCA)

A method for assessing a project's costs over its lifetime, including construction, operation and decommissioning. LCCA is especially useful in comparing the costs of alternative project design options. It integrates various measures that evaluate net savings, internal rates of return, payback periods and savings-to-investment ratios.

## Level of service

A measure of the adequacy or effectiveness of a service provided by an asset or a group of assets (e.g. frequency of outages per year, availability of library space, etc.), from a corporate, end-user, or asset or operational perspective.

## **Mitigation**

Climate change mitigation refers to efforts to reduce or prevent the emission of greenhouse gases. Mitigation can mean using new technologies and renewable energies, making older equipment more energy efficient, or changing management practices or consumer behaviour.

## **Monitoring**

Observing and checking the progress or quality of an activity over a period of time, keeping it under systematic review, and maintaining regular surveillance over it.

## **Organizational structure**

The way in which an organization defines roles, responsibilities and supervision.

## **Plan**

A detailed description or approach to implementation for an approved initiative, which is generally future-oriented. Typically, plans are approved by council for implementation or are amended into bylaws. In the case of climate change mitigation, plans can include transportation plans, energy conservation plans, and GHG reduction plans. Local action plans for GHG emissions reduction can focus on municipal operations or the broader community, or both.

## **Policy**

A set of basic principles and associated guidelines, formulated and enforced by the governing body of an organization, to direct and limit its actions in pursuit of long-term goals.

## **Resilience**

In the municipal context, this refers to the ability of individuals, institutions, businesses and systems within a community to anticipate, mitigate, adapt and thrive no matter what kinds of climate-related and other chronic stresses and acute shocks they experience. Resilience is the result of a series of adaptive measures.

## **Stakeholder**

A person or an organization that has a legitimate interest in a project or entity, or would be affected by a particular action or policy.



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