

Climate Lens Integration in Ontario Municipalities

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DISCLAIMER:

This report is an academic exercise conducted by graduate students in the Master of Environment and Sustainability (MES) program in the Centre for Environment and Sustainability (CES) at Western University, London, Ontario, Canada. The named consulting company ("Climate Lens Consulting") that produced this report is a fictional entity created for the purpose of this exercise. For information on this program, please visit www.uwo.ca/mes/.



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EXECUTIVE SUMMARY

As climate change becomes a growing concern for Ontario municipalities, ways to approach climate-conscious decision-making are coming to the forefront. Practitioners are turning to climate lenses as one of the methods to move towards a more sustainable future. Clean Air Partnership (CAP) has taken a proactive approach to supporting municipalities by creating their own climate lens tool which helps municipalities take the first step in identifying possible climate implications of their decisions.

CAP is supporting municipalities to incorporate climate change considerations into their decision making by improving their Climate Lens Tool, collating support resources, and facilitating sharing of municipal efforts and lessons learned. As such, the Climate Lens Consulting (CLC) group endeavored to gain a better understanding of how municipalities are using climate lenses, the barriers they face, and the resources they have found helpful in developing their climate lens. The CLC team gained this insight by directly interviewing representatives from eight municipalities. This information was supplemented by a previously recorded interview and a recorded webinar from two additional municipalities. From these ten diverse municipalities, the following insights were gathered:

- More than half of the municipalities interviewed are currently using a climate lens (in-house or CAP Tool) and the majority have a standard "climate implications" section in their council report template.
- The "climate implications" section in staff reports is often not completed in a way that adequately inform project decisions.
- Engaging with departmental during the development of a climate lens is crucial to ensure it is used effectively.
- Collaboration and sharing of resources between municipalities is beneficial in the development and advancement of climate lens tools.

- A climate resource hub would be a helpful tool to advance municipal climate knowledge for the development and use of a climate lens.
- Environmental education, staff and political support, capacity of staff, and cost are all barriers to the implementation of climate lenses.
- climate lens champions, such as council, senior level staff, and the public, are essential in bringing climate implications into the decision-making process.
- Applying a climate lens to municipal projects/services can be challenging due to limited staff capacity and resources, however, it can be effective in influencing decision-making.

In addition to these efforts, the CLC team interviewed two climate professionals who currently work for, or have worked for, WSP, one of the world's leading professional services firms. The goal of these interviews was to gain insight on developing and using climate lenses in municipalities, from the perspective of outside advisors. From these interviews, the following insights were gathered:

- There are different motives for applying a climate lens, which will influence how it is developed and used.
- Creating a user-friendly climate lens will increase the likelihood of it being used effectively.
- Having accessible support resources for users of climate lenses is crucial.
- A project may experience vastly different outcomes depending on the phase at which the climate lens is being applied.

The insights gained from the interviews allowed CLC to identify one of the largest barriers to successfully implementing a climate lens as being a lack of supportive resources. CLC was also able to use the insights from municipalities to create a Step-by-Step climate lens Implementation Guide for municipalities to follow when looking to implement their own climate lens, as well as

recommendations for CAP to improve their Climate Lens Tool. These recommendations are as follows:

- Provide instructions for using the tool
- Increase accessibility
- Change registration requirement

Now equipped with this new information, CAP can better support municipalities implementing and using climate lenses by providing a more user-friendly Climate Lens Tool. This will impact an entire network of municipalities across Ontario, allowing them to actualize the implications of climate change in their projects.

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1 | INTRODUCTION

Climate change is increasing the frequency and extremity of events such as heat waves and extreme precipitation, highlighting the importance of introducing climate considerations into infrastructure design and decision making. Currently the federal government requires a climate and environmental assessment to be completed for infrastructure projects over \$10 million, however there are no such requirements for smaller projects (Infrastructure Canada, 2019). Infrastructure encompasses the physical assets related to transportation, sanitation, water, and beyond, therefore resilient infrastructure can protect Canadians from some of the impacts of climate change.

A climate lens is a decision-making framework that allows a municipality to assess a project's climate change resilience, as well as how the project may impact the municipality's greenhouse gas emissions (Infrastructure Canada, 2019). This allows for projects to be evaluated holistically, providing a better representation of its impacts.

A climate lens tool can be used at various stages of a project to evaluate its climate implications. Using a climate lens tool in the earlier phases of a project can influence design and propel mitigation efforts before the project is implemented. Commonly, the project manager will use the tool to help fill out a "climate implications" section in a report to council, which customarily is a standard template with open-ended questions. Evaluating the responses to the climate implications question retroactively can provide insightful information into the climate implications of specific projects. This information can be reused in future when implementing similar projects.

Clean Air Partnership (CAP) currently has an online climate lens tool. The tool is a qualitative method of assessing the GHG emissions and climate change resilience of a project. CAP was seeking input from municipal stakeholders to identify opportunities to the next evolution of their current climate lens tool.

Furthermore, CAP wanted to better understand how municipalities are applying climate lenses, and the lessons learned and outcomes of its application thus far. This will enable them to better support the 30+ municipalities within the Clean Air Council municipal staff peer-to-peer network.

This report contains the results of data collected by the University of Western Ontario student Climate Lens Consulting team about how different Ontario municipalities are applying climate lenses in their decision-making. It also references consulting professionals' experience with regards to climate lenses. This information will allow Clean Air Partnership to bolster support Ontario municipalities implementing and improving their own existing climate lenses. The report will present the findings and provide recommendations regarding how climate lenses can be effectively implemented, as well as changes that can be made to the current CAP climate lens tool to improve its applicability and effectiveness.

2 | PROJECT OBJECTIVE

The objective of this project is to provide insights to Clean Air Partnership (CAP) regarding how to better support municipalities to implement and/or improve their application of a climate lens. Furthermore, this project will bring forth recommendations to improve CAP's own Climate Lens Tool.

3 | PROJECT DESCRIPTION AND DELIVERABLES

CAP connected the student Climate Lens Consulting (CLC) team to municipal staff in their network to gain insight through interviews on municipalities' experiences using a climate lens and evaluating a project's climate implications. CLC also interviewed two industry professionals to gain a new perspective on their experience consulting with clients on green infrastructure projects, environmental assessments, and implementing climate lenses. These interviews enabled CLC to accomplish the following major deliverables:

1. Establish the current condition of municipal climate lens application: understanding how climate lenses are used, barriers to implementation, and resources used in their development. To gain this insight, eight interviews were conducted by CLC, and additional information was gained through reviewing a previously recorded interview and a recorded webinar from two additional municipalities.
2. Provide a detailed list of recommendations for how CAP can further develop their climate lens tool and better support their network of municipalities.
3. Develop a Step-by-Step climate lens Implementation Guide for municipalities to use when initially beginning to develop and implement their climate lens. This was created through insights gained from municipality and industry interviews, as well as consultation with CAP representative.
4. Present CAP's municipal network with the key findings from this project, as well as introducing the Step-by-Step climate lens Implementation Guide. CLC will also facilitate a discussion period for municipalities to share their thoughts and insights on the presented content.

4 | PROJECT SCOPE

The scope of this project includes the following:

CLC assessed the experience of 10 municipalities with respect to the integration of a climate lens into their decision-making process. Of these 10 interviews, 8 were completed over Zoom by CLC, one was completed by CAP prior to the project commencement, and the final was completed in the form of a webinar desktop study. Direct interviews were scheduled for 45 minutes and followed a set of 11 questions. The questions were designed to understand municipality's experience with climate lenses as well as how effective the current frameworks are. The City of London's experience using their climate lens was assessed through the desktop study that examined a webinar presentation given by the City as well as other published information such as case studies. For the remainder of this report all of these methods of data collection will be referred to generally as "municipal interviews".

In addition to municipal interviews, the CLC team conducted two interviews with industry professionals to gain insight on implementing climate lenses and conducting climate assessments from a consulting perspective.

This project focused on climate lenses addressing Scope 1 and 2 Emissions. It did not include Scope 3 Emissions.

5 | CLIMATE LENSES IN CANADA

Climate lenses are made up of two different assessment types. The GHG mitigation assessment provides an opportunity to assess the predicted greenhouse gas production or reduction created because of the project taking place (Infrastructure Canada, 2019). The climate change resilience assessment considers how climate change will impact the project from the point of view of a risk assessment, for example, assessing if the project is vulnerable to heat or precipitation impacts (Infrastructure Canada, 2019).

The Canadian Government requires that certain projects apply a climate lens to receive funding, as well as infrastructure projects valued at \$10 million or more (Infrastructure Canada, 2019). However, there are many projects that a municipality undertakes that are below this \$10 million mark that would still benefit from considering climate implications in the planning stages. As an increasing number of Ontario municipalities make Climate Emergency Declarations or create Climate Actions Plans, the need for a framework to evaluate the climate impact and resilience of municipal projects/services/decisions has become paramount. For this reason, many municipalities have begun to consider implementing, or have implemented, some form of a climate lens.

5.1 | CLEAN AIR PARTNERSHIP'S CLIMATE LENS TOOL

The current CAP Climate Lens Tool is a qualitative decision-tree style web tool that allows a municipality to evaluate their infrastructure projects. The evaluation is based on three initial questions:

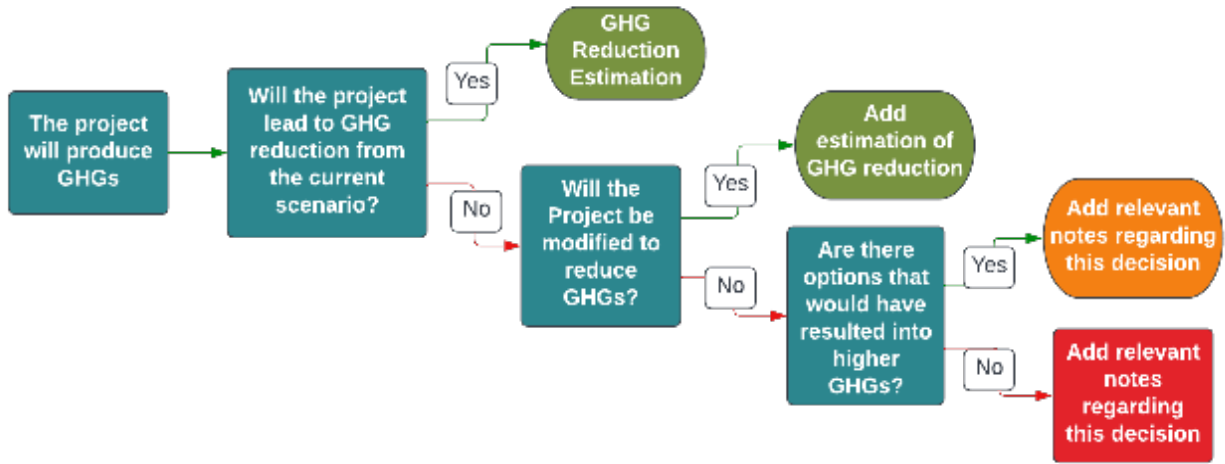
1. Will the project produce GHG emissions?
2. Will the project be affected by temperature?
3. Will the project be affected by precipitation?

CAP developed this tool so that any Ontario municipality can use it to determine the high-level climate implications of any type of project. The tool allows for the users to input some quantitative values, though it is predominately a qualitative assessment, as well as reasoning behind the decision as they progress through the tool. Once the user has finished inputting all information the tool provides a summary of their responses and whether each section is red (the project is GHG intensive or at risk from climate change), yellow (it has moderate impacts and risks but there are options that are considered worse), or green (the project leads to a reduction in GHGs, precipitation exposure, or temperature exposure). The flow of the tool is shown in Figure 1 on the following page.

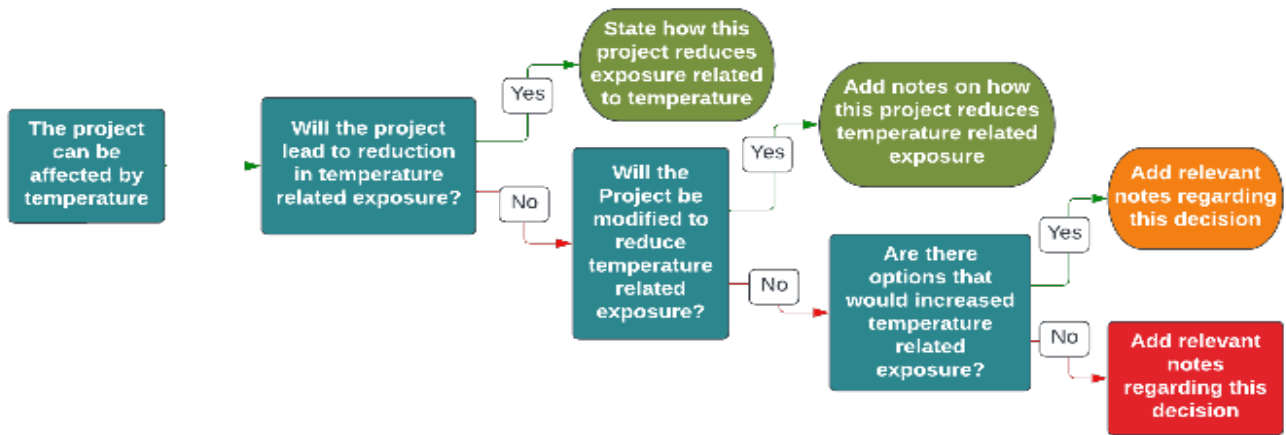
Figure 1. The existing Clean Air Partnership Climate Lens Tool flowchart.

The flowchart shows what type of input is required by the user as well as what response pathway leads to each colour-coded result. Each individual pathway is related to one of the three main questions asked by the tool.

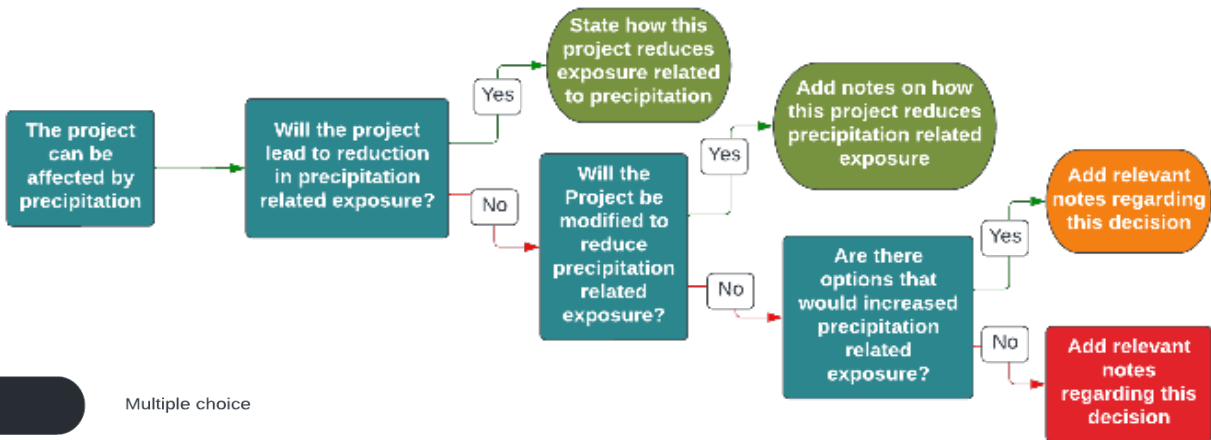
1



2



3



Multiple choice



Input text or value

5.2 | LONDON'S CLIMATE LENS

The objectives of London's climate lens include:

1. Ensuring climate issues are included in decision-making and the evaluation of existing plans, programs and projects
2. Establishing a clear process of accountability and tracking of climate emergency issues including information collection on the outcomes of decisions and tracking the progress of the projects and programs implemented
3. Elevating the understanding of the importance of climate emergency issues in decision-making across the organization

The City of London developed a climate lens assessment following the City's Climate Emergency Declaration in 2019. The climate lens is not intended to function as a yes or no or stop-or-go tool for decisions, but to assist the City of London to make informed decisions on projects, policies and strategy development regarding climate change considerations. The climate lens process can result in a modified project or program scope, depending on the climate considerations at hand. The climate lens process within the City of London is defined by the implementation of a customized Climate Emergency Screening Tool (CEST).

The CEST is a customized climate questionnaire used to guide the screening of projects and programs for key climate emergency issues and opportunities for improvement. Similar to CAP's tool, CEST includes both climate mitigation and adaptation considerations. The climate mitigation section assesses how the project will impact climate. The adaptation section assesses how the project will be impacted by future climate disruptions or interactions. These sections are customized based on the project being reviewed and do not employ a universal questioning for every project being considered.

The CEST questionnaire assesses climate implications within five separate streams:

1. Master Plans, Guidelines and Strategies
 - Considers the implications of climate change on business plans, fleet plans and other city plans for future projects
 - Identifies key places where climate change considerations should be included

2. Existing and New Projects/Programs
 - Assesses the lifecycle of major projects and programs to incorporate climate considerations
 - Reviews both existing and new projects to identify improvement opportunities for climate outcomes

3. Quick Assessment of Existing Opportunities
 - Assesses day-to-day operations and identifying areas of improvement
 - Includes employee commuting, building energy use, etc.

4. Annual Budget Updates and Multi-year budgets
 - Annual budget amendment requests require the application of a climate lens to highlight potential opportunities and risks
 - Process is led by the finance department, supported by the Climate Emergency Resource Team

5. Building climate change capacity
 - The design and implementation of the climate lens process provides an opportunity to increase knowledge and understanding of climate emergency issues within the organization, to normalize conversations about climate change
 - Increased understanding is done through a stream of initiatives including staff training during the onboarding process, and professional development, networking and internal coordination on shared objectives

Further Steps in Climate Screening Process:

If the initial screening of the project through the CEST questionnaire identifies significant climate change mitigation or adaptation concerns, or there is a significant lack of available data and understanding to consider climate implications within a project, additional steps can be taken to provide clarity and alternative options analysis. These steps are listed below.

1. Internal Review
 - High level quantification of climate mitigation aspects by internal staff to provide clarity to appropriately inform decision-making
 - This includes staff from environmental programs, facilities and city planning that are familiar with climate implications

2. Detailed Internal Study
 - If issues remain following the engagement of internal experts or identified issues, or if aspects are more complex than an internal review can manage, the project will move into this step
 - This includes a stand-alone report done by internal specialists containing a project-specific detailed quantification of climate mitigation and adaptation aspects

3. Engage External Qualified Specialists for Specific Aspect
 - If the project requires assessment from aspects outside of internal staff's areas of expertise, engaging external qualified specialists may be needed
 - External experts can procure existing relevant data, conduct primary data collection, conduct data analysis and interpretation, and prepare detailed models
 - Limited to the analyses of one or more specific aspects, but not fulsome review of the entire project

4. Consultant-Driven climate lens Assessment

- Such projects are more likely to be for significantly large infrastructure projects and may be subject to Government of Canada's requirement to complete use a climate lens in order to complete a GHG mitigation assessment and/or a climate change resilience assessment
- These assessments require significant investment from the City and involve detailed and extensive modeling, data analyses and comparative evaluation of feasible options

One of the next steps the City of London is taking includes shifting the culture within City decision-making towards a climate-first process. This is to be done through the addition of a climate implications section within staff reports that presents the results of the CEST. Further, driving internal action through transparency and consistency will allow for the identification of systemic hurdles, to present solutions to those hurdles. In addition, there will be a focus on organization-wide opportunities and understanding to connect departments and staff within the municipality, to break down barriers through the city departments.

In summary, the City of London has developed the most advanced climate lens out of all Ontario municipalities. This comprehensive Lens allows for inter-departmental collaboration, and education throughout the organization, contributing to greater climate literacy and consideration within the City of London. This is done through a customized project-specific Climate Emergency Screening Tool, that assesses project-specific climate mitigation and adaptation measures through five streams of activities.

6. | INTERVIEW RESULTS

6.1 | MUNICIPALITIES INTERVIEWED

By interviewing a wide range of municipalities, the CL team was able to get a full understanding how climate lenses are used in Ontario municipalities as well as the challenges they face with regards to implementation and effective application. Figure 2 shows the range in population size of municipalities interviewed, reflecting those different perspectives were collected as population size may impact the structure of the climate lens, as well as their capacity and available resources.

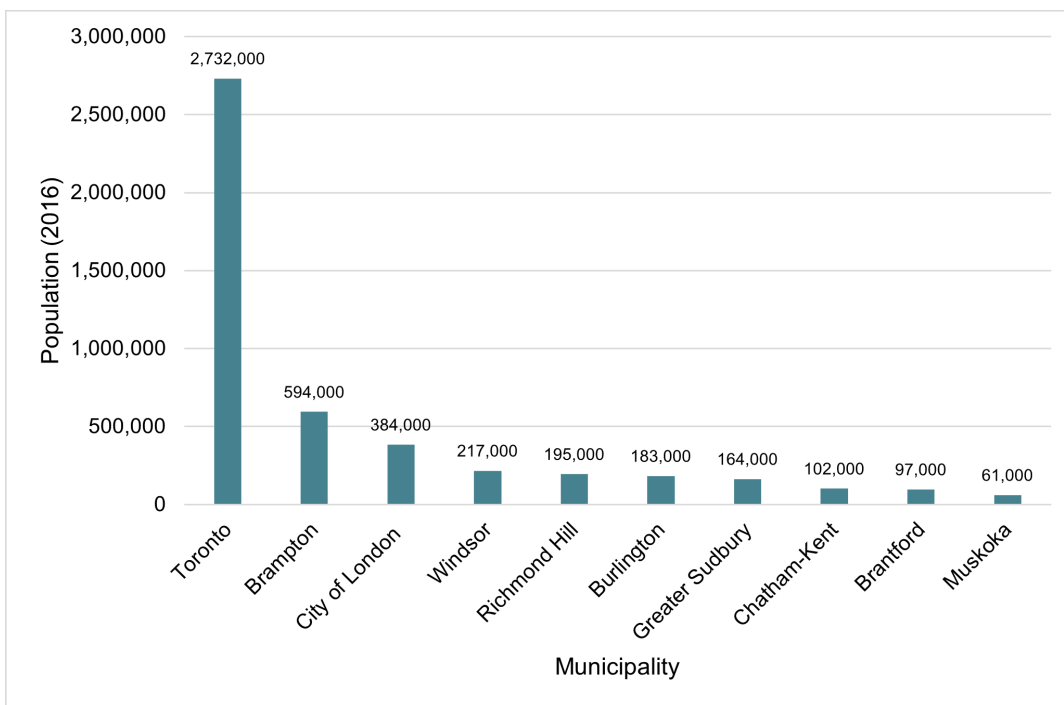


Figure 2. The population sizes of the municipalities interviewed.
Data retrieved from Statistics Canada, 2016 Census.

6.2 | MUNICIPAL INTERVIEW RESPONSES

Representatives from each municipality were asked the following questions:

1. a) Can you provide us with some background/summary information on: The climate lens commitments made by council via climate emergency declaration/via climate plan/other.
 b) Is there a climate implications section that is a standard part of the council report template at present? Is there a commitment/direction to develop such a section?
2. Have you used the Climate Lens Tool available on the CAP website? We want to see if they are aware of it, if they use it, if they don't use it, why and what would it need to become to make it useful to them? If they haven't used it already then, the goal is to make them aware of it and give them a sense of what it is able to do and what it isn't yet able to do.
3. What research/resources have you found to be of value to you as you have explored options to advance your climate lens.
4. What conversations have taken place within your team/your municipality regarding the development of a climate lens? Has a process and identification of resources/tools that need to be developed been identified?
5. Are there any insights you could share with us from those discussions based on what the climate lens should ideally be able to do as a bare minimum to the ideal scenario?
6. What are some of the top to-do's that are the next steps in the development of a climate lens for your municipality?
7. What do you think are some of the top collaboration opportunities related to collective municipal efforts to advance a climate lens?
8. What barriers do you see (at council or staff level) to applying a climate lens? Any solutions to suggest re-addressing these barriers?

9. How important is it to have someone champion this process? Whose support do you think is critical?
10. How is your climate lens used in decision making?
11. Do you find your climate lens effective? Does it actually influence decision making?

This section will present the overarching key findings related to the municipalities' experiences with climate lenses. This will be followed by a discussion of each key finding. Section 6.4 will discuss the findings specifically related to Clean Air Partnership's Tool.

Key Findings from Municipal Interviews

- More than half of the municipalities interviewed are currently using a climate lens (in-house or CAP Tool) and the majority have a standard "climate implications" section in their council report template.
- The "climate implications" section in staff reports is often not completed in a way that can inform project decisions.
- Engaging with staff during the development of a climate lens is crucial to ensure it is used effectively.
- Collaboration and sharing of resources between municipalities is beneficial in the development and advancement of climate lens tools.
- A climate resource hub would be a helpful tool to advance municipal climate knowledge for the development and use of a climate lens.
- Environmental education, staff and political support, capacity of staff, and cost are all barriers to the implementation of climate lenses.
- climate lens champions, such as council, senior level staff, and the public, may be essential for the decision-making process.
- Applying a climate lens to municipal projects can be challenging due to staff willingness and limited resources, however, it can be effective in influencing decision-making.

More than half of the municipalities interviewed are currently using a climate lens (in-house or CAP Tool) and the majority have a standard “climate implications” section in their council report template.

The municipalities of Muskoka, Brantford, Windsor, London, and Toronto currently have climate lenses that are being applied, while the district municipality of Chatham-Kent indicated that they are in the process of developing one and are using the CAP Tool in the meantime. The remaining four municipalities interviewed do not have a formal climate lens. To provide context, a map of the municipalities interviewed and their current status with climate lenses is shown in Figure 3 on the following page. climate lenses were generally developed as part of a municipality’s response to a climate emergency declaration.

Encouragingly, every municipality interviewed noted that there has been council action, or at the minimum, that there was council support in taking some action on climate change. All the municipalities also indicated action on the part of including a “climate implications” section as a standard part of council reports, with eight out of the ten interviewed having this section already established. Chatham-Kent and Toronto indicated that they do not yet have a standard climate implications section in their council reports, however there are departments within the municipalities that have independently started including such a section in their staff reports.

The “climate implications” section in staff reports is often not completed in a way that can inform project decisions

A significant challenge being faced by most municipalities is that staff are not completing the “climate implications” sections in council reports in a comprehensive enough way to truly inform the climate implications of decisions in front of council. This climate implications section is intended to discuss the way that the project is impacted by climate change and influences the municipalities emissions/resilience. Some municipalities have standardized prompts that guide

staff through completing this section, however there is also the option of saying that there are no applicable climate impacts. In this case “improper use” typically means that staff are indicating that there are no applicable climate impacts for projects when this isn’t the case. Reasons cited were lack of climate education on the part of staff, no encouragement to fill out the section from upper management and misunderstanding of the definition of “climate implications”. Furthermore, a general climate impacts section template tended to be too general which resulted in it being challenging for different departments to complete properly.

Engaging with staff during the development of a climate lens is crucial to ensure it is used effectively

Half of the municipalities interviewed reported having internal conversations before developing their climate lens, which introduced staff at the municipality to the concept before implementation, while gaining their perspective. Municipalities who solicited feedback from departments, and developed climate lens training, had higher rates of climate lens tool use.

Municipalities have also reported staff being unaware of how to properly use the climate lens, even, in some case, after training. This shows there is still much work to be done in effectively communicating the value of a climate lens and how to use it. Municipalities have seen success in climate lens usage when there is a designated person to whom all municipal staff, especially project managers, can approach if in need of guidance when using the lens.

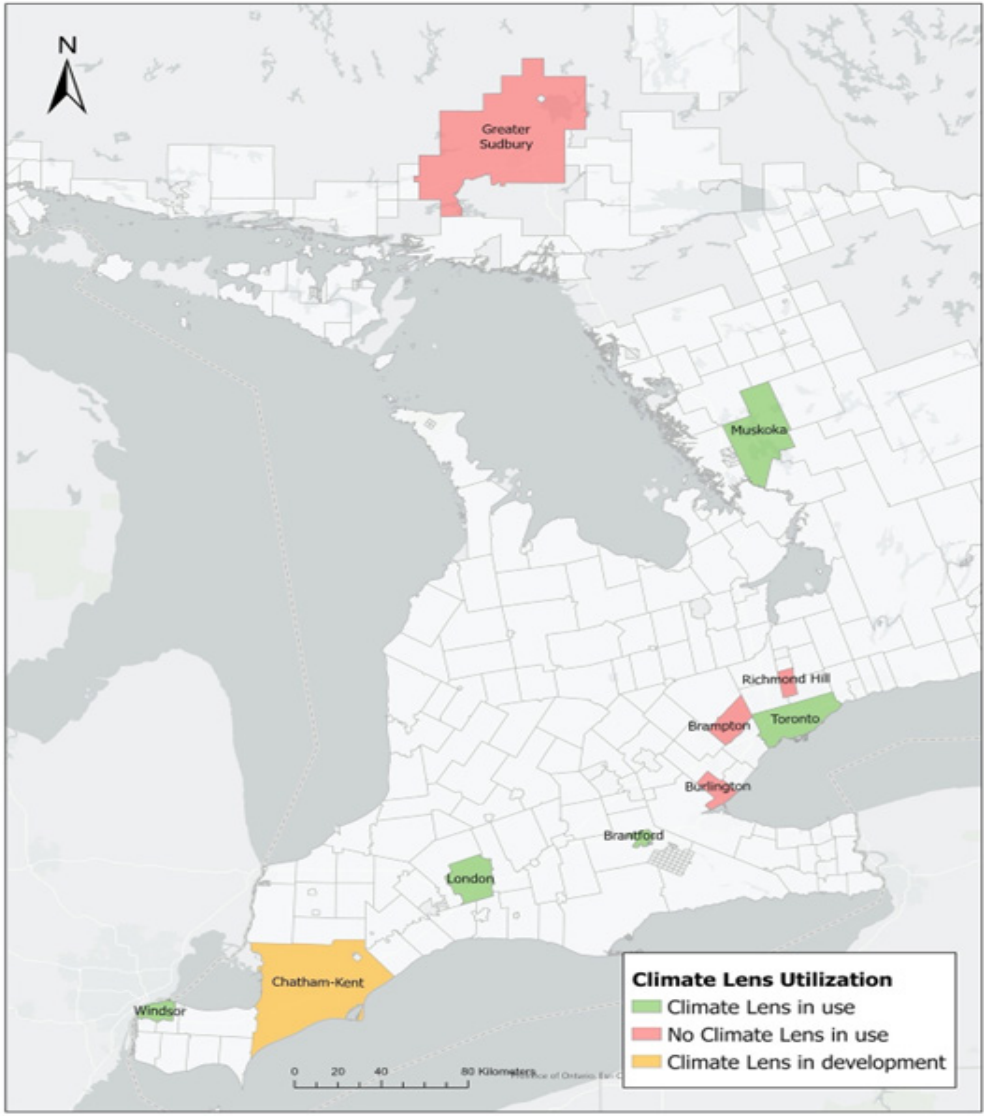


Figure 3. Map of municipalities interviewed with climate lens utilization indication.

Collaboration and sharing of resources between municipalities is beneficial in the development and advancement of climate lens tools

Integrating climate considerations into decision-making has encouraged cooperation between municipalities. Municipalities are engaging with each other to share ideas and best practices regarding climate actions, but it can be difficult to find the right partners based on the wants and needs of each location. Two municipalities specifically commented on the importance of CAP to facilitate interaction between municipalities through webinars and other events. While all municipalities recognize the importance of collaboration to obtain better resources in the development of a climate lens, some report barriers to collaboration. For example, not knowing who to reach out to or not having contact with a municipality who has completed development of a climate lens. These barriers can impact the effectiveness of collaboration opportunities.

Another restraint to collaboration is budget. Smaller townships and municipalities may not have the same resources available to develop a climate lens as a complex and larger municipality would. For example, Muskoka is collaborating with six smaller townships but has found it difficult to make progress as these locations do not have the capacity or budget to allocate to climate lens implementation. Five out of the nine municipalities interviewed (not including the City of London) have collaborated with other locations in the past and intend to collaborate further but recognize the need for additional resources and formal collaboration techniques.

A climate resource hub would a helpful tool to advance municipal climate knowledge for the development and use of a climate lens

Municipal staff are often not well versed in climate change topics as they may lack a background in the science of climate change or fail to understand how climate change is interconnected to development-specific or municipal

decisions. This educational gap can result in the climate implications sections of reports not being used appropriately and therefore climate not being properly factored in during the decision-making process. For example, one representative specifically mentioned an occasion where the climate implications section of a report was not filled in for a project related to energy retrofits for municipal buildings. Energy retrofits, by their nature, have a climate implication as they reduce the energy demand intensity, however because the reason for the retrofits was not climate-related the staff completing the report filled out the climate implication section as not applicable. For this reason, many municipalities are starting their climate lens process by providing educational opportunities for staff.

The City of Toronto has made advancements to increase staff knowledge and collaboration in climate efforts through developing an internal climate hub. This is an internal online platform that houses all of Toronto's climate knowledge, climate related data and GHG quantification methodology, including emission factors. This ensures that all staff have access to the same climate data and information. For many municipalities developing such a database on their own is not feasible. This presents an opportunity to create a shared resource library to ensure all municipalities have access to the information needed to maximize the effectiveness of their climate lens.

Environmental education, staff and political support, capacity of staff, and cost are all barriers to the implementation of climate lenses

All municipalities highlighted the importance of knowledge on climate change and sustainability concepts to increase climate lens adoption. Education on these concepts continues to be a major gap from a council, department, and project level. Similarly, three municipalities see one barrier being the application of the tool in the appropriate and effective fashion. The staff writing reports

may not have considered the climate implications of a project, but still add an answer to the section (for example “N/A”) to ensure the report is complete, therefore diminishing the value of including climate considerations for projects. Four out of nine municipalities highlighted budget and resource restraints. Without the capacity (i.e., additional staff, time for additional projects) to develop a climate lens it may never be implemented. Additionally, once the climate lens is implemented, municipalities realize that a staff member will be required to champion the process and ensure it continues to be effective, which may not be possible for smaller municipalities. Budget restraints can also be majorly impactful, as without a budget to cover the implementation and development of a climate lens tool, the project will never be able to proceed. Political barriers also impact climate consideration. Two municipalities stated that “buy-in” from council is imperative to gain validity of the project. The benefits need to be clearly communicated to ensure council has the information needed to make decisions.

Climate lens champions, such as council, senior staff, and the public, may be essential for the decision-making process

Most municipalities emphasize support from council as being necessary for climate lens implementation. If the municipality did not mention council explicitly, then support from senior leadership or the municipality’s Chief Financial Officer was valued. This was particularly relevant for the City of Toronto where they formulated a climate lens planning table consisting of 24 leaders from each division, resulting in these individuals acting as climate lens champions. This ensures coordination between divisions to ensure consistency between climate lens use, however this is most relevant with larger municipalities. Senior leadership support was mentioned by five out of the nine municipalities (London did not mention this). Richmond Hill and Chatham-Kent also noted the importance of staff and the public acting as champions, indicating that public pressure is a driver for environmental considerations within the municipality.

Applying a climate lens to municipal projects can be challenging due to staff willingness and limited resources, however, it can be effective in influencing decision-making

Incomplete or improper application of climate lenses hinders their effectiveness in influencing decision-making. The City of Windsor specifically indicated that climate lens success depends on departmental willingness. Some of their departments are taking the time to complete the climate lens whereas others simply write “N/A” in their reports. The District of Muskoka had an alternative concern regarding project specificity, where projects cannot accommodate the climate lens results since they do not have the funding.

Although Toronto and Burlington are at the early stages of their climate lens tool, they both agree that there has been a culture shift in the municipality, where staff are becoming more engaged and climate conscious. Therefore, these municipalities have experienced a positive change that has the potential to influence decisions.

The general consensus is that the climate lens tool can help to bring climate considerations into municipal decision-making. However, they are just beginning to be introduced into most municipal governments, and therefore it is not yet clear how effective they truly can be.

6.3 | INDUSTRY INTERVIEW RESPONSES

In addition to the municipal interviews, two climate professionals were also interviewed. These interviews were with staff who currently work for, or have worked for, WSP, one of the world's leading professional services firms. The goal of these interviews was to gain insight on developing and using climate lenses in municipalities, from the perspective of outside advisors. The key findings from these interviews can be found below:

Industry Interviews Key Findings

- There are different motives for applying a climate lens, which will influence how it is developed and used
- Creating a user-friendly climate lens will increase the likelihood of it being used effectively
- Having accessible support resources for users of climate lenses is crucial
- A project may experience vastly different outcomes depending on the phase at which the climate lens is being applied

There are different motives for applying a climate lens, which will influence how it is developed and used

Understanding the motivation behind the choice to use a climate lens for a specific project is crucial to the success of its effective usage. The choice to use a climate lens tool could be for a variety of reasons including funding requirements, mandatory requirements from council, or larger municipal climate action plans to reduce GHG emissions. Understanding the motivation will allow the team to understand the resources needed to implement a climate lens appropriately and the best time to introduce it.

Creating a user-friendly climate lens will increase the likelihood of it being used effectively

Designing a climate lens with an easy-to-use step-by-step process is vital to the success of its use. In most cases, it is the responsibility of the project manager to use the climate lens. The project manager may or may not understand the implications on climate that are caused by their project, therefore it is important to create climate lenses that asks specific, targeted questions which can lead to more accurate responses.

Having accessible support resources for users of climate lenses is crucial

As stated above, many people tasked with using climate lenses do not necessarily have experience with climate implications, so it is crucial for users to have access to support to ensure the lens is being used correctly. Support resources can include dedicated staff which can serve as point-people for helping others use the climate lens, as well as up-to-date resources and databases to access climate data. Many times, municipalities face capacity gaps and cannot guarantee that the necessary supports and resources are available.

A project may experience vastly different outcomes depending on the phase at which the climate lens is being applied

Often, once a project is completed, municipalities will use a climate lens tool to evaluate the climate implications of their project, allowing them to fill in the climate implications section of the report. Evaluating the responses to the Lens retroactively can provide insightful information with regard to the climate implications of specific projects. This information can be used in the future when implementing similar projects. In contrast, using a climate lens in the earlier phases of a project can influence design and propel mitigation efforts before the project is implemented, accelerating resilience.

6.4 | FEEDBACK ON CLEAN AIR PARTNERSHIP'S CLIMATE LENS TOOL

Municipalities interviewed as well as one of the industry interviewees discussed their experience with the Clean Air Partnership's (CAP) Tool. This section provides an overview of this feedback.

Key Findings on The CAP Climate Lens Tool

- Over half of the municipalities interviewed have used the tool
- Municipalities are using the CAP climate lens tool as a foundation for the development of their own climate lenses
- There are areas for improvement, specifically related to ease of use and the tool setup
- The language used in the tool can make it challenging for people without a climate background to use it

Over half of the municipalities interviewed have used the tool

Toronto, Windsor, Chatham-Kent, Brantford and Muskoka were all familiar with the tool. Chatham-Kent uses the tool to evaluate all municipal decisions. Toronto, Greater Sudbury, and Windsor made specific comments to how they didn't need to access the tool at this point in time, mainly due to them having their own individual climate lens. It should be noted that CLC did not get feedback from London concerning the CAP Climate Lens Tool.

Municipalities are using the CAP climate lens tool as a foundation for the development of their own climate lenses

Of the municipalities familiar with the tool, most mentioned that the tool

provided a good starting point for developing their own climate lens. For example, Brantford and Toronto specifically used the tool as a resource in the development of their own climate lenses.

There is room for improvement, specifically related to ease of use and the tool setup

The municipalities interviewed provided the following recommendations to improve the CAP's Climate Lens Tool:

- Users are prompted to enter an email, decision number, and decision name before starting the tool, however these requirements decrease how often staff were willing to use the tool
- The estimate for the amount of time it takes to use the tool is not accurate
- The final PDF indicating the results should be compliant with the Accessibility for Ontarians with Disabilities Act so that the PDF can be used in published reports
- The nuances between a project's climate impacts, and its social benefits were not included, which made it challenging to share the results with the public
- The tool was not as applicable to larger municipalities because it is too general and does not quantify specific levels of impact on projects that would be needed for larger regions
- There should be instructions on how to use the tool, for example a PDF or web page that walks a user through how the tool works and explain the necessary inputs.

The language used in the tool can make it challenging for people without a climate background to use it

The tool refers to whether or not a project can “be affected by” temperature

or precipitation. However, without a technical background, understanding this question can be quite challenging because it generalizes hazards and how they can impact the project. Many people think of climate change risks in terms of specific hazards, for example flooding as a result of heavy precipitation or heatwaves as a result of changing temperatures. Furthermore, not everyone is familiar with how climate change can change weather. For example, aspects like how climate change causes more heatwaves is relatively well understood, however aspects like climate change's impact on precipitation is not well understood. Many places in Canada are projected to see the same amount of precipitation annually, but this precipitation will likely occur over fewer days resulting in more intense precipitation events. While this may be well known to those with a climate background, this is not something everyone is familiar with.

7 | RECOMMENDATIONS

7.1 | SUGGESTED UPDATES TO CLEAN AIR PARTNERSHIP'S CLIMATE LENS TOOL

CAP's climate lens tool appeared to be most helpful for municipalities in the initial stages of developing their own climate lens. The most common application of the lens was as a learning tool; many municipalities based their own climate lens off of CAP's tool.

Based on municipal feedback the following recommendations are made to encourage use of CAP's tool:

1. **Provide instructions for using the tool:** Create a webpage or PDF that provides instructions for using the tool as well as background information about how to answer the questions. This should include:
 - A walk-through that shows the user how to use the tool and what information is required, similar to Figure 1 in section 5.1
 - More accurate estimate of the time required to use the tool
 - Explanation on how to answer and/or interpret the Climate Lens Tool's questions - relating the questions to specific hazards, for example projects that are impacted by precipitation may be those at risk of flooding etc., could help users of the tool interpret the questions
 - A note on the nuances of a climate lens; be clear that a red or yellow result does not mean that the project cannot proceed and that even if the assessment outcome is red or yellow the project may proceed - Indicate that users will be prompted to provide justification for moving forward with the project if it is red or yellow, and that these justifications will be included in the final PDF report

2. **Increase accessibility:** Ensure that the webpage and the results PDF are accessible in accordance with the Accessibility for Ontarians with Disabilities Act.

3. **Change registration requirement:** Inputting a decision name and registering with an email should be made optional.

These changes can reduce the barriers municipalities experience when considering applying CAP's Climate Lens Tool.

7.2 | STEP-BY-STEP CLIMATE LENS IMPLEMENTATION GUIDE

Based on feedback from interviews, the CLC Team has laid out a general path for municipalities to guide them in their climate lens implementation. Not all implementation journeys will mirror the process below, however the following steps are intended to be used as a reference.

1. **Obtain council directive for the development of a climate lens and climate implications section in council reports:** This step is the most crucial. Council will mobilize the initiative and communicate the importance of a climate lens to all staff, which is vital in its successful implementation.
2. **Identify a staff champion for climate lens development:** This person will lead the development of the climate lens within the municipality and will lead the climate lens inter-departmental team.
3. **Identify a department lead for each department (or division) to be a part of the climate lens inter-departmental team:** Each department lead will represent the needs of their department during the development stages of the climate lens implementation process.
4. **Set goals and conduct climate lens research:** Key goals for the climate lens initiative should be set and influenced by the motivation for the climate lens implementation.
5. **Develop a climate lens implementation workplan with feedback from the inter-departmental team:** The workplan should be crafted using the forementioned research. Collecting input and feedback from the climate lens inter-departmental team is important so that all departments are represented, and their needs are being addressed.

6. **Design a climate lens tool for a specific priority action area:** Led by the staff champion and department leads, this ensures the tool is effectively used for specific types of action areas including planning, transportation, facilities, waste, stormwater, etc.
7. **Conduct departmental staff training:** This training will introduce departmental staff to the climate lens addressing the specific priority action area, as well as to the available resources they can use to effectively use the tool and who to reach out to for guidance.
8. **Solicit feedback from the department staff and adjust the climate lens tool accordingly:** This will identify and address any gaps in the climate lens tool, ensuring its effective use as a framework for recognizing the climate implications of a project.
9. **Recommunicate available resources:** Ensuring staff know where to find the information and guidance they need for using the climate lens tool effectively.
10. **Repeat steps 6-10 with the next priority action area:** By working with each specific priority action area to develop a climate lens tool separately, each tool will be granular enough to provide accurate feedback on the climate implications of a project. This contrasts with using one general overarching tool for all types of projects / action areas.
11. **Share learnings:** Implementing climate lenses is still a relatively new approach to assessing the climate implications of a project. Sharing resources, lessons learned, frameworks, etc. with other municipalities and CAP can help others progress their own climate lenses and can continue to strengthen the municipal climate action network.

8 | CLOSING REMARKS

Throughout this process CLC was able to gain insight on the successful implementation of a climate lens within municipalities, as well as the barriers to developing a climate lens. Within interview responses, many common themes came to light. The major findings of the project address the need to address gaps in staff's climate knowledge, the importance of both staff and council approval in municipal climate decisions, and the importance of information sharing.

Sharing common resources and information allows for all Ontario municipalities to be on the same page as they move towards the common goal of integrating climate knowledge into municipal decisions. When each municipality works together to share resources to aid in the process of establishing a successful climate lens, the province of Ontario will be one step closer to the long-term goals set out in The Ontario Climate Change Action Plan.

Although the concept of a climate lens is a novel approach within municipal governments, it is essential in meeting future climate goals. Ontario is a beautiful place, filled with both natural and built environments. It is of utmost importance that municipalities work together to maintain balance between these environments and continue to work towards a more resilient and sustainable future.

RESOURCES

[Clean Air Partnership Climate Lens Tool](#)

[City of London Staff Report on Outcome of Climate Lens Process Applied to Waste Management Programs and Projects](#)

[City of London Staff Report on Outcome of Climate Lens Screening Applied to Major Transportation Projects](#)

[Infrastructure Canada Climate Lens](#)

[FCM Guide for Municipal Climate Change Staff](#)

[City of Windsor Staff Guidance Document on Assessing Climate Change Risks](#)

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Infrastructure Canada. (2019, October 31). climate lens - General Guidance. From Government of Canada

Statitics Canada. (2021, October 27). Census Profile, 2016 [Census division], Ontario.

