

Encouraging green infrastructure across university campuses in Ontario: What's policy got to do with it?



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Introduction

Research Objective

This research had two related aims. The first aim was to evaluate the relationship between policy and green infrastructure (GI), to better understand the importance of policy in responding to climate change challenges. The other aim was to explore the level of policy (regional, provincial, federal) required to successfully implement GI across Ontario's universities.

Background & Research Question

There is a growing interest in adopting policies, guidelines, standards, and laws across university campuses to ensure green practices are integrated into their built environment³. While the percentage of institutions with a policy is relatively low, the usefulness of policies to engage and facilitate sustainability initiatives is promising⁴. However, it is unclear in the literature the level at which policy should be implemented to encourage GI effectively.

This study explored the research question: What is the role of policy in the adoption of green infrastructure by Ontario's universities?



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Methods

The study employed a qualitative research approach, of semi-structured, open-ended interviews. The open-ended interviews allowed the participants to express their views towards existing policies and frameworks related to green infrastructure⁵.

Participation in this study involved one-on-one interviews of approximately 60 minutes in length and took place online, over Microsoft Teams. The interviews featured 10 open-ended questions accompanied by prompts and sub-questions relating to the overarching areas of interest:

- Participant's engagement or knowledge of green infrastructure,
- opinions on current and future opportunities for green infrastructure policies; and
- recommendations for current and future green infrastructure policies.

Analysis & Results

Thematic Data Analysis

All 8 interviews were audio recorded and transcribed using Microsoft Teams' trusted transcriptionist and placed into NVivo qualitative analysis software. The researcher employed the following steps: familiarization with the data, line-by-line coding, theme development, and interpretation. While there were certain research questions in mind, the researcher employed a grounded theory approach to generate new findings from data. The data collected was analyzed inductively to identify patterns, themes, and relationships.

Results

This research study explored the political frameworks that would influence the adoption of green infrastructure across the nation, including university campuses. The findings revealed key themes, including multi-level government collaboration, regulatory frameworks and incentives, and funding mechanisms.

Through the initial round of coding, the findings revealed all participants had a detailed understanding of the benefits and barriers to implementing green infrastructure. Because these aligned with those presented in the literature, they were left out of the results.

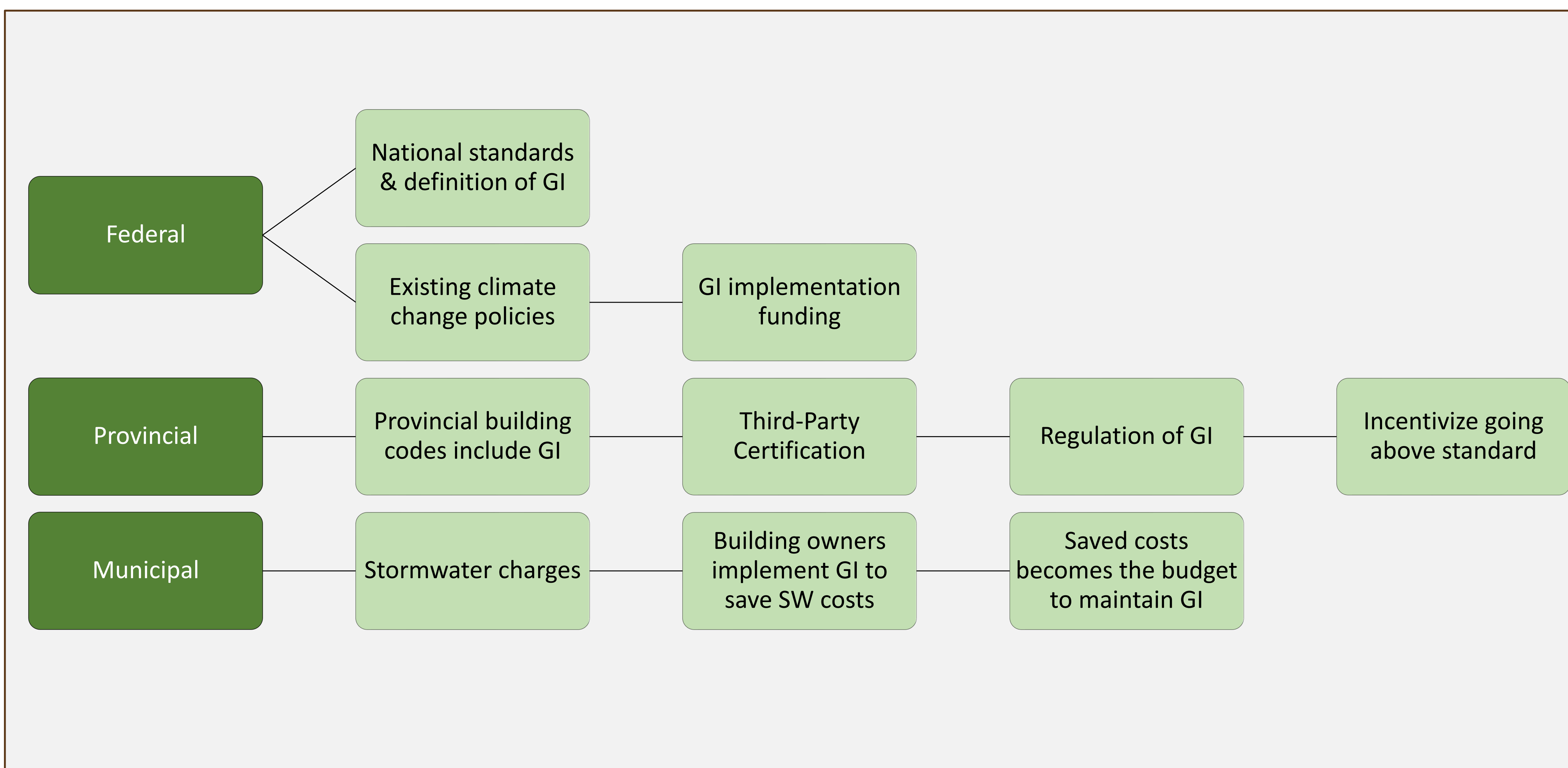
Through initial observations of the data, it was clear that widespread adoption of green infrastructure depended largely on supportive policy frameworks at all municipal, provincial, and federal levels of government. "Peter" explained that this was how "you can get scale, and you can get consistency and equivalency across lots of jurisdictions."

The participants made it clear that for collaboration to work across multiple levels of government, clear roles and responsibilities were needed to avoid friction. Based on these findings, figure 1 visually represented what the roles and connections looked like.

The participants emphasized the need for supportive policy frameworks at all municipal, provincial, and federal levels of government. The federal level was seen as critical for standardization and funding, while the provincial level was seen as important for creating a level playing field for incentivizing green infrastructure developments through voluntary funding and rebates.

Municipal incentives were also discussed, with the idea of leveraging stormwater management challenges as a stormwater charge presented as an opportunity for encouraging green infrastructure on university campuses. Additionally, the importance of regulatory frameworks, incentives, and funding mechanisms for promoting green infrastructure initiatives was emphasized.

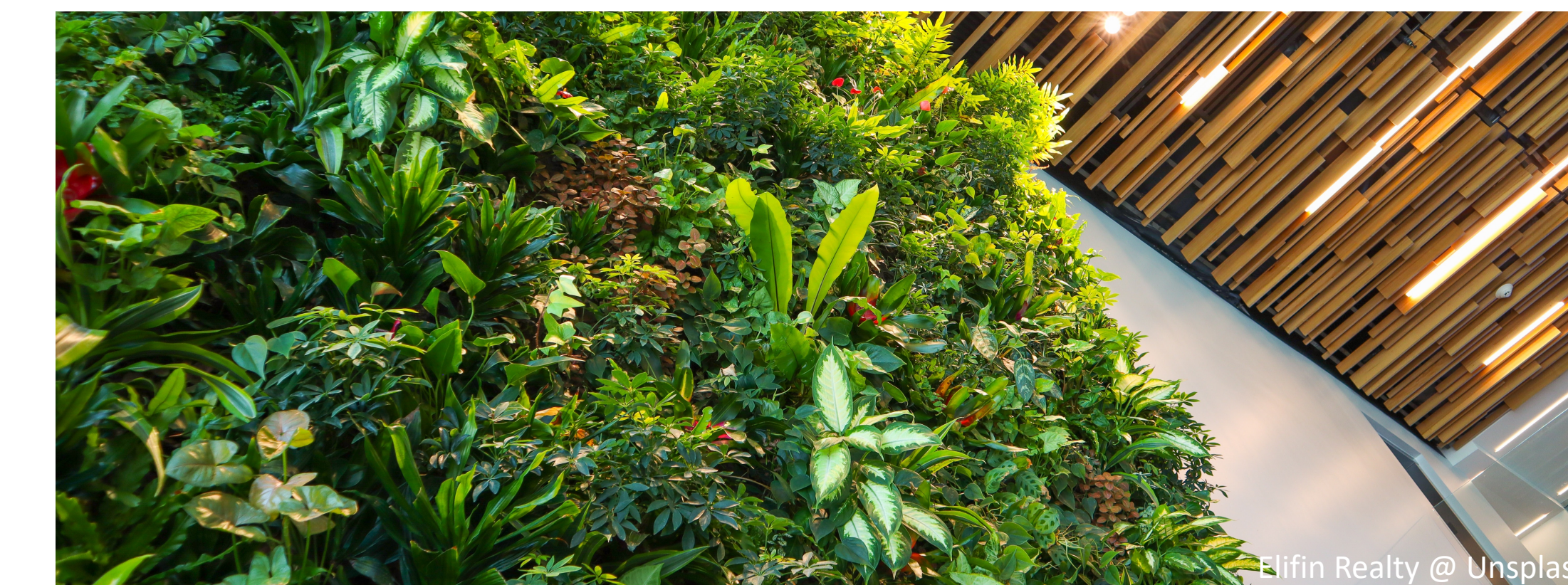
Figure 1 – Policy Motivations for Green Infrastructure (GI) on University Campuses



Conclusion

The funding for universities comes from provincial and federal government, not municipal government. However, universities are like a city within a city, and they share a neighborhood relationship with municipalities. The interviews with participants showed that there is a consensus on the importance of municipal incentives in encouraging green infrastructure implementation on a local scale, but federal and provincial factors are also important for the long-term establishment of green infrastructure.

This study suggested why a policy is important, and that multi-level collaboration was required to successfully implement green infrastructure across Ontario's universities.



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Future Research

The participants of the study acknowledged areas for future research to explore the implications of private credit trading, maintenance & regulation frameworks, and municipal stormwater charges on the outcomes of GI across Ontario's universities.

References and Affiliations

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