

Communication of Green Infrastructure Across the GTA

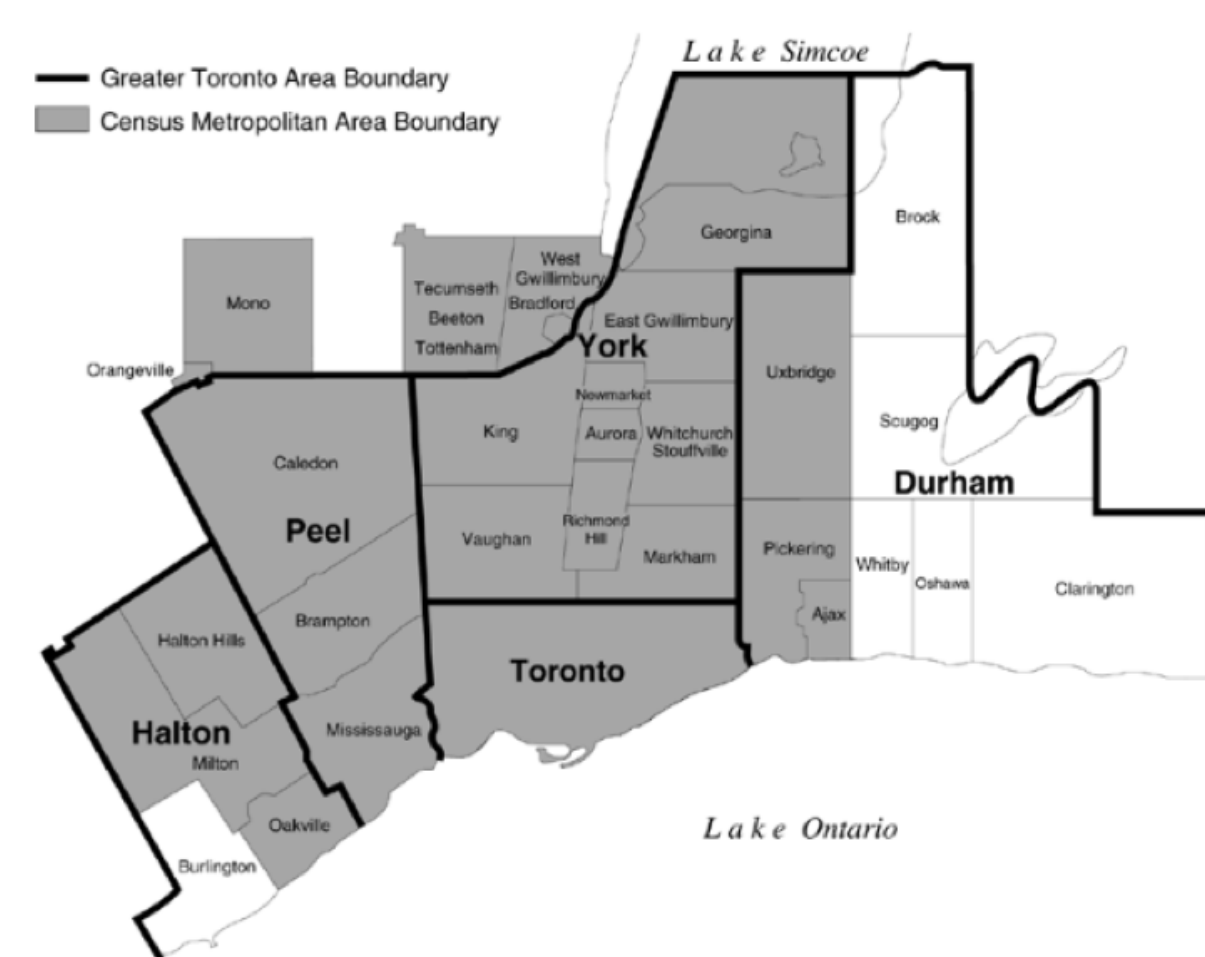
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SSM1100 Research Paper



Introduction

Climate change is causing an increase in the intensity and frequency of rainfall events. These impacts are heightened in urban areas due to high levels of impervious surfaces. Green Infrastructure (GI) are increasingly being adopted by municipalities as a tool for climate mitigation and adaptation. However, these initiatives rely on engagement of various stakeholders to achieve widespread implementation. Communication plays a crucial role in encouraging engagement in and installation of GI.

Methods



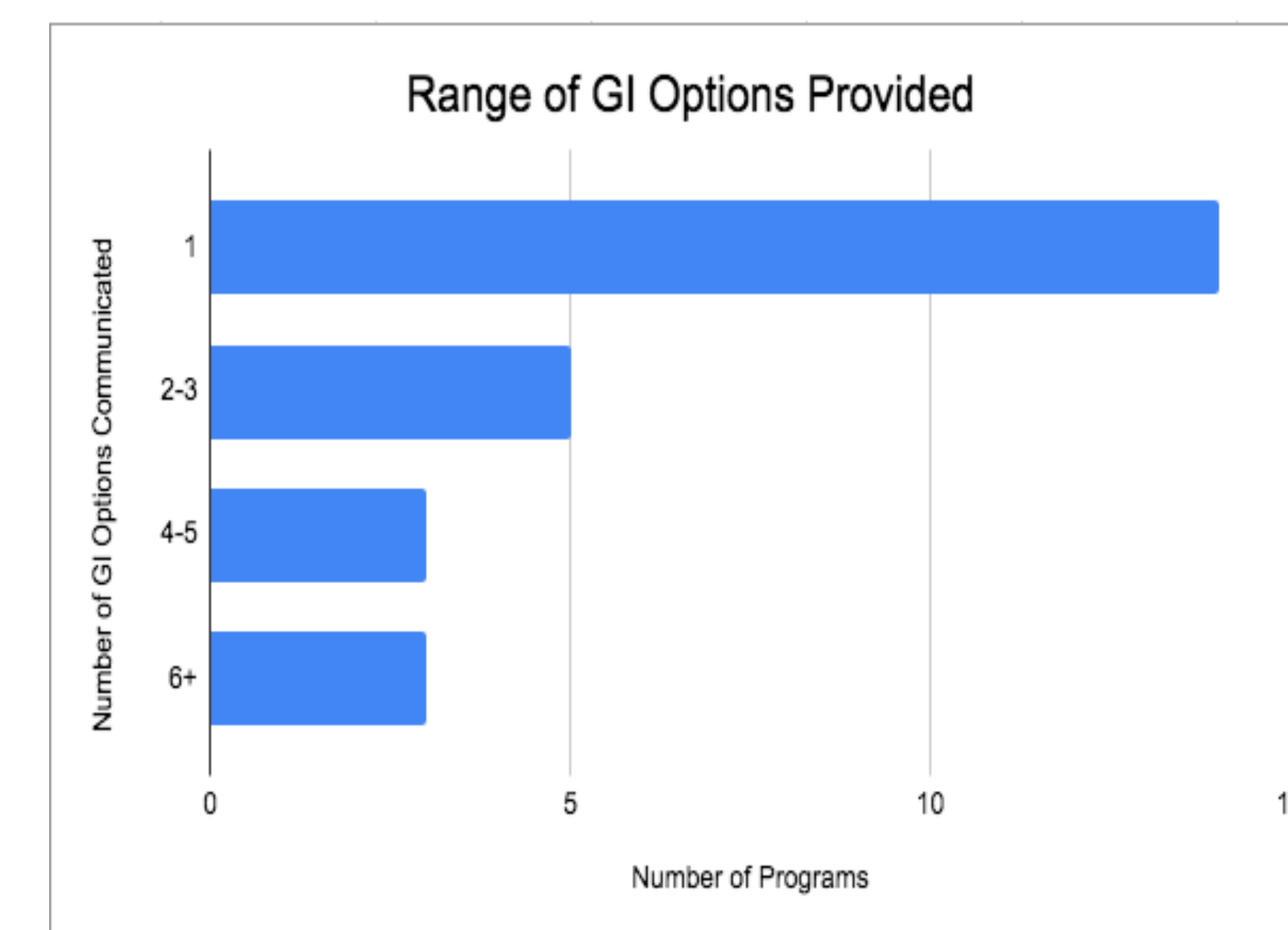
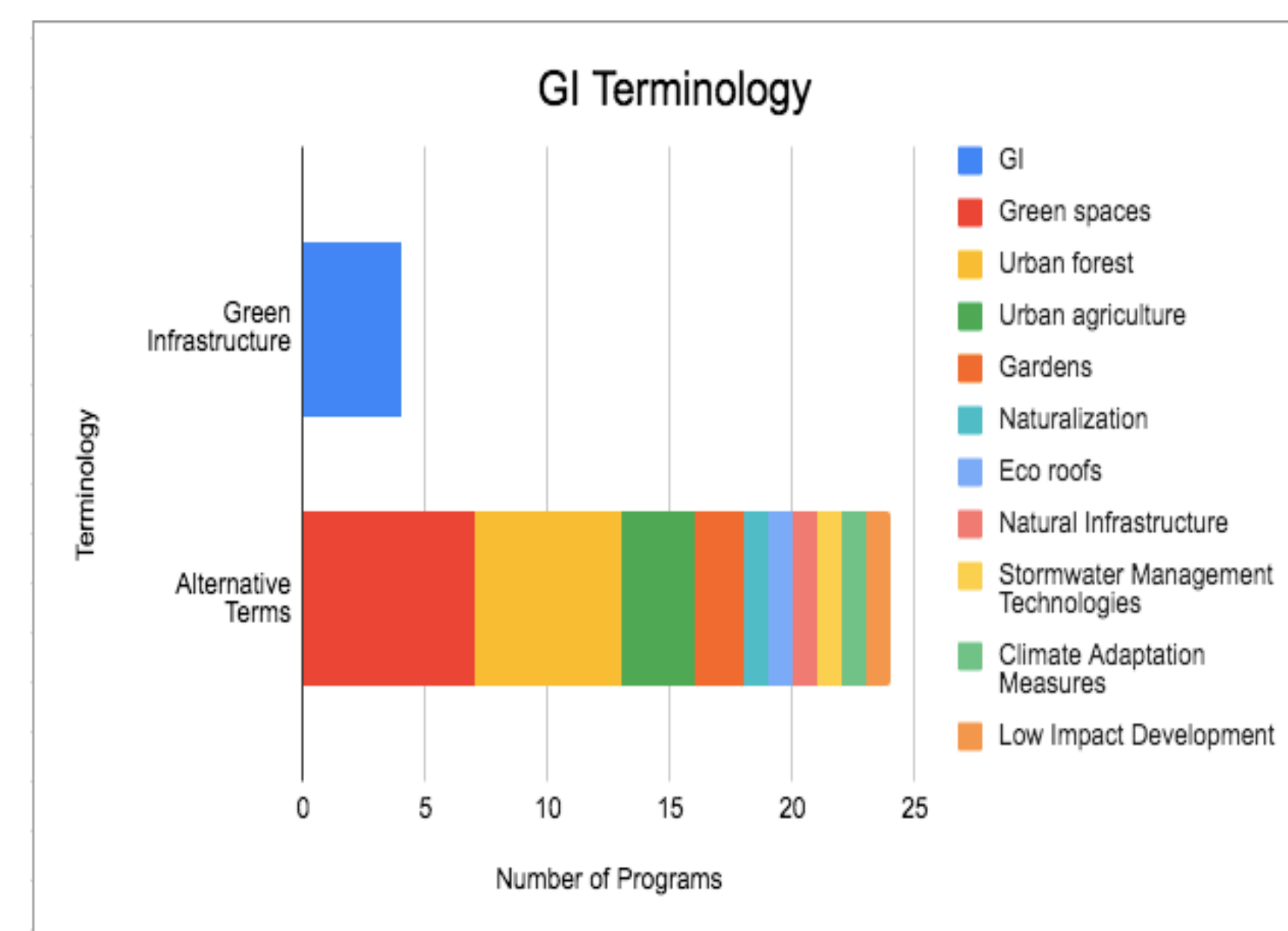
Objectives: (1) Identify GI programs targeting homeowners in the GTA, (2) collect data on how the programs are defining GI in their online communication

and (3) examine and categorize ecosystem services described in the benefits communicated.

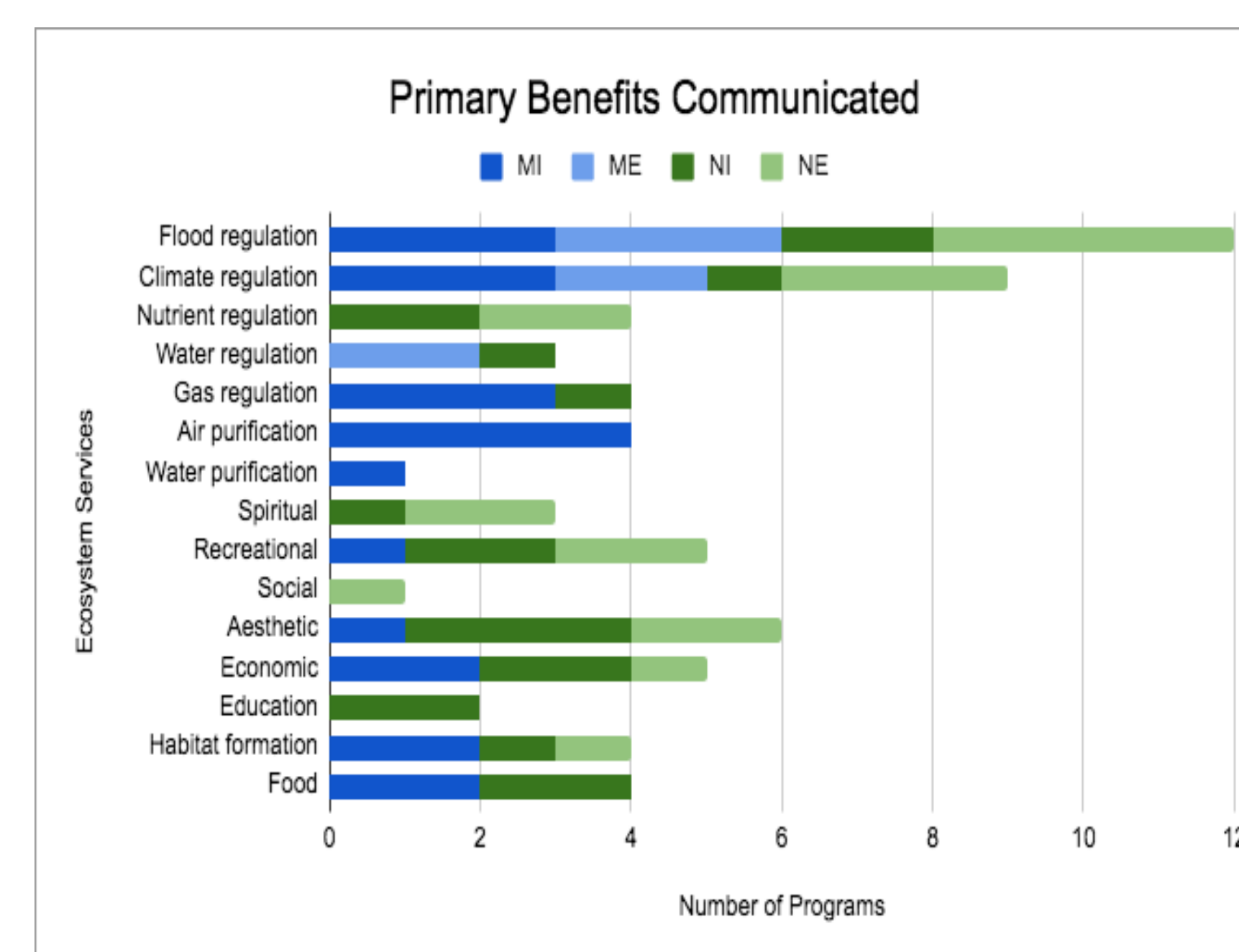
Indirect Benefits to Humans		Direct Benefits to Humans	
Supporting	Regulating	Provisioning	Cultural
Primary production	Gas regulation	Food	Aesthetic
Nutrient cycling	Climate regulation	Fresh water	Recreational
Soil formation	Disturbance regulation	Raw materials	Spiritual
Hydrological formation	Biological regulation	Genetic resources	Historic
Pollination	Water regulation	Medicinal resources	Scientific
Seed Dispersal	Waste regulation	Ornamental resources	Educational
	Nutrient regulation		Economic
	Soil retention		
	Disease regulation		
	Flood regulation		
	Water purification		

Table 1. Modified Conservation in a Changing Climate ecosystem service framework. This was used to categorize communicated benefits.

Results



Out of the twenty-five GI programs analyzed, four used the term “green infrastructure” in their online communication (left). In total, 11 different terms were used. 13 programs of the programs only mentioned one type of GI (right). The remaining mentioned at least 2 or more.

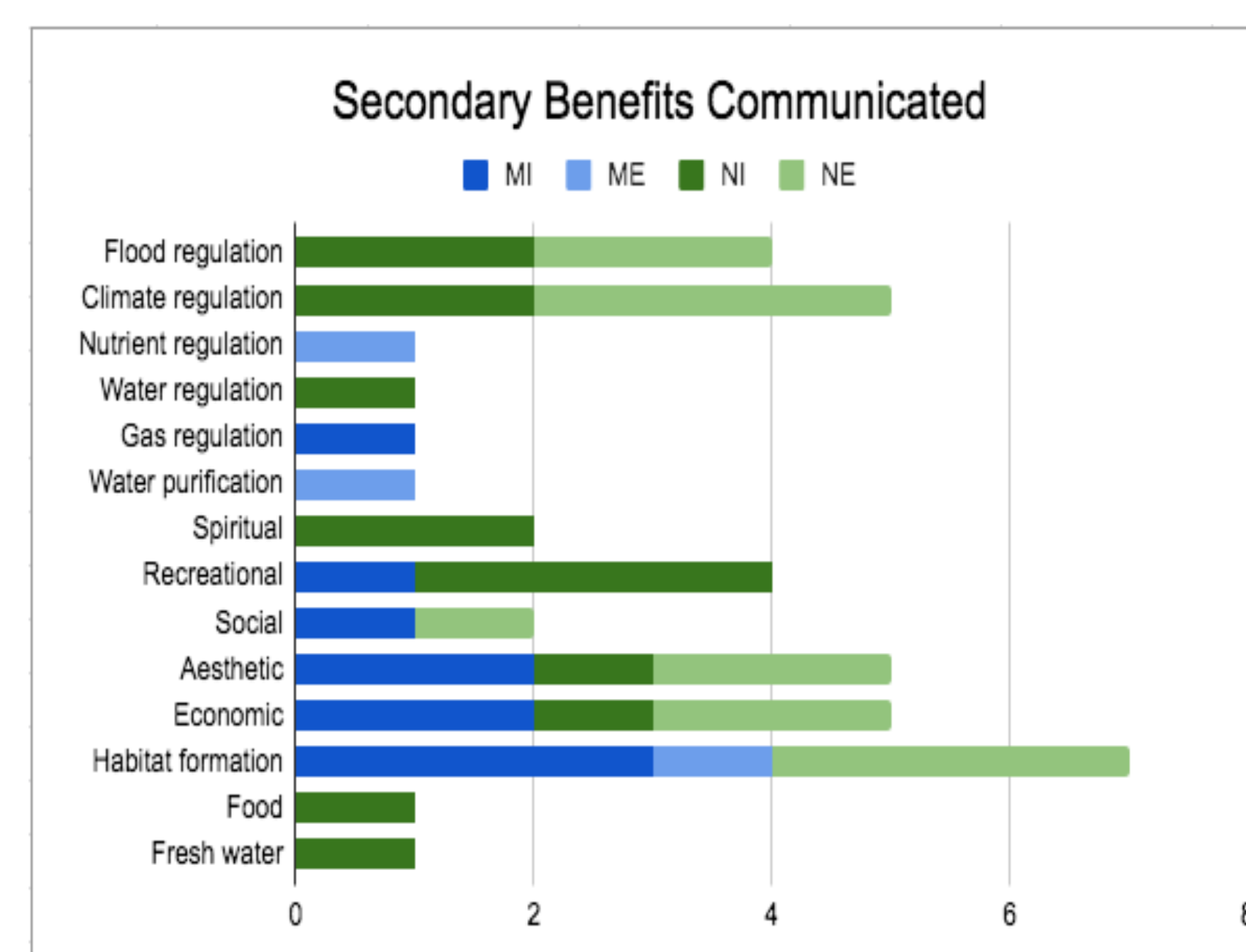


Primary benefits: emphasized throughout communication

- Regulating services was the most frequently communicated
 - Flood regulation
 - Climate regulation
 - Mostly communicated by municipal led programs

Secondary benefits: less emphasized or listed as additional benefits

- Cultural services was the most frequently communicated
 - Aesthetic, recreational, and economic benefits
 - Mostly communicated by non-municipal led programs



Discussion

- There needs to be more of a mutual consensus on GI terms to prevent confusion.
- Trends observed in the alternative terms used – some are very broad and others are more specific.
- Terms communicated should always be explained in the context of GI to help residents make connections.
- All definitions provided for programs that used the term GI varied.
- In the context of the GTA, GI is primarily defined as a stormwater management tool.
- Non-municipal led initiatives communicate a broader range of benefits.
- Programs did not present residents with options for GI based on differences in specific needs.
- All GI was communicated as offering the same benefits.
- GI is not understood by residents as a solution to climate change. Municipalities need to recognize this gap in communication.
- More programs should have discussed cultural benefits related to socializing.
- Cultural services should be more frequently highlighted as a primary benefit.

References

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