EXPLORING INTERACTIONS AMONG LOCAL GOVERNMENTS AND NON-GOVERNMENTAL ORGANIZATIONS IN THE DELIVERY OF URBAN FOREST MANAGEMENT ACROSS CANADA

by

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Submitted in partial fulfilment of the requirements for the degree of Master of Environmental Studies

at

Dalhousie University

Halifax, Nova Scotia

August 2023

Dalhousie University is located in Mi'kmaki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

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Abstract

Forests, trees, and the associated vegetation in cities and towns provide a myriad of benefits and services to growing populations of urban dwellers. The procurement and distribution of urban forest benefits is dependent on forest management and the coordination of actors involved in those processes. Non-governmental organizations (NGOs) in particular are helpful in the delivery of urban forest goals because of their ability to supplement government resources and capacity or advise on management practices. Despite their contributions in urban forest management, to date they have received limited scholarly attention. To address the gap in existing literature, this research sought to develop a deeper and more nuanced understanding of urban forest NGOs and the many ways in which these groups may interact with their respective local governments. The objectives of the research are twofold. Firstly, it serves to determine the structure of urban forest NGO and local government collaborations. The second objective is to elucidate practitioners' perspectives towards these collaborations. We collected data using semi-structured interviews with three groups: leaders of NGOs, municipal government officials in urban forest, parks, or public works departments, and urban-forest experts who have observed how NGOs and governments interact. The participants represent 32 individuals in nine Canadian cities. Our results demonstrate that while challenges and vulnerabilities existed, participants held positive associations concerning their local NGO-municipal government collaborations. Local governments should not be hesitant to engage NGOs in their management. While there is a spectrum of NGO-government collaborative arrangements with diversity in formality, power, proximity, and funding, no one structure will yield the most streamlined services. This research proposes recommendations for practitioners embarking on cross-sector collaborations. Despite their positive attributions, forest decision-makers should be mindful of potential vulnerabilities in their collaborative operations and benchmark their experiences against other regional and national examples of successful NGO-government collaborations.

List of Abbreviations Used

MOU - Memoranda of understanding

NGO – Non-governmental organization

NPS – New public service theory

RDT - Resource dependency theory

Acknowledgements

I must first acknowledge my supervisor and a vital mentor, Dr. Peter Duinker. You have exceeded any expectations I had of a supervisor. It has truly been an honour to have had the opportunity to work with someone I admire so much intellectually. Thank you for your commitment to this research and for your belief in me and my work. I am immensely grateful for the countless opportunities you provided to me to learn and grow in all new directions and for making it fun along the way.

I would also like to thank my committee members for their steering, insights, and feedback. To Dr. Melanie Zurba, thank you for your teachings and for bringing me into an encouraging lab space. To John Charles, thank you for being so committed to this work and for sharing your decades of expertise in municipal government. To Dr. James Steenberg, thank you for your constant enthusiasm about research and unique perspectives. Thank you to Dr. Jenny Baechler for serving as external examiner of this work.

Thank you to Amelia Peres for your assistance in translating; to Dr. Polina Baum-Talmor for the coffee chats and teachings on qualitative methods; to the School for Resource and Environmental Studies faculty and staff for their administrative support; to Dr. Tahia Devisscher and Dr. Sophie Nitoslawski for encouraging me to pursue research and graduate studies.

Thank you to the Social Science and Humanities Research Council, Mitacs Accelerate, Halifax Regional Municipality's (HRM) Urban Forest Department and the NSERC CREATE Urban Forestry (UFor) grant for their generous financial contributions to this research. Thank you to my fellow researchers, professors, and the facilitators of the UFor program for creating a supportive research space. Thank you to Crispin Wood and Natalie Secen of HRM's Urban Forestry for their guidance and allowing me to learn the ins and outs of municipal forest management.

Thank you to my MES cohort for your support, humour, and friendships. What a privilege to share this experience with the group of you. Thank you to Rob Dunfield for being the first reader of much of this thesis, for your encouragement, and for your genuine interest in my work; to Kenzie Young for first welcoming me to Halifax; and to Beth Bray for the beers and the laughs during an otherwise stressful time.

I'd like to acknowledge my parents. Thank you for being my biggest fans and for always encouraging me pursue of my passions, wherever they took me. For this and so many other reasons, thank you most of all.

And lastly, my deepest thanks to the local urban forest leaders across Canada, who so generously offered me their stories and words of encouragement along the way. This thesis is written in deep appreciation of all your important work in the field, performed often with little recognition, to make our cities greener.

Chapter 1: Introduction

1.1 Urban forestry

Urban forests are the trees – single and in groups – and associated vegetation and ecosystem components growing in or near dense settlements such as cities, towns, and communities (Vogt, 2020). Urban forests generate a wealth of values and benefits for cities that contribute to enhanced ecological, social, and economic conditions for residents – otherwise known as ecosystem services (Millennium Ecosystem Assessment, 2005). The benefits that trees and vegetation provide to growing urban populations have led to urban forests becoming increasingly mainstreamed in public discourse (Martin & Doucet, 2022) and political agendas (Conway et al., 2020). The popularization of the study and practice of urban forestry coincides with unprecedented global climate variability and extremes (Lin et al., 2021).

Densely populated landscapes in cities are understood to be especially vulnerable to the impacts of these climate extremes. The cumulative effects of urban development and climate change increase the likelihood of urban heat islands and flood events and perpetuate socioeconomic inequities in cities (Reckien et al., 2017; Chapman et al., 2019; Smith et al., 2023). The compounding effects of hardscape development and climate change are having adverse effects not only on urban residents, but on the health and longevity of urban trees (Ordóñez & Duinker, 2014). These conditions impact the composition and functioning of urban forests and hinder their ability to generate their full potential of ecosystem services (Smith et al., 2019; Trlica et al., 2020).

To preserve existing urban forests and meet the growing demand for nature-based solutions to climate change, local and higher level governments are increasingly putting forward ambitious canopy cover targets, urban forest management plans, and other green infrastructure

initiatives (Conway et al., 2020; Trlica et al., 2020; Hargrave et al., 2023). The delivery of urban forest benefits is dependent on forest management (including planning) (Kozová et al., 2018). However, when attempting to implement their urban environmental programs, governments are met with barriers such as operational constraints, competing priorities, inadequate budgets, and lack of public or political support (Driscoll et al., 2015; Enloe et al., 2017; Ordóñez et al., 2020). To overcome barriers in their service delivery and advance urban forest efforts, cities are developing a range of management strategies, including community-level engagement, diversifying funding sources, and decentralized, grassroots efforts (Young, 2011).

1.2 Urban forest governance

In the context of urban forestry, governance has been defined as establishing policies and strategies surrounding the planning and management of trees on private and public land (Ferrini et al., 2017). However, this definition does not encompass a critical dimension of urban forest governance. Under more current scholarship, there is an emphasis on non-government actors, novel policy instruments, and decentralization of environmental decision-making to better adapt to current social and ecological challenges than traditional governance modalities (Liang & Mol., 2013). Municipal governments are no longer the sole dominant player in the delivery of urban forest programming. While forest management was once characterized by a relatively closed process and a lack of transparency in government decision-making (Duinker et al., 2014), in the face of mounting challenges, a wider palette of actors has begun to become involved in this domain.

In urban forestry, this is characteristic of the concept of network governance (Buizer & Van Herzele, 2012). Both research and politics have become more focused on participatory processes. Kleinschmit et al. (2009) emphasizes this shift from the traditional delivery of urban

forest programming from “governance by government” to “governance with [or without] government”. Network or co-governance can be interpreted as the rules, processes, and interactions among stakeholders that influence collective decision-making, behaviours, and outcomes (Graham et al., 2003; Lemos & Agrawal, 2006; Devisscher et al., 2022).

A core tenet to the concept of network governance is public participation. In the context of forest resource management, public participation refers to any situation where people other than resource managers offer opinions on matters pertaining to forest management (Duinker, 1998). Public participation has been widely researched in the context of forest resource management – working to legitimize the roles of individuals and non-civic groups (Tanz & Howard, 1991; Robinson et al., 2001; Beckley et al., 2006). The historical view that decisions around forests should be left to forest managers and government officials is no longer popularly held or practiced. Citizens are becoming more aware of the benefits of trees and professing their desire for more dominant roles in the decision-making surrounding them. Public participation processes can lead to better decision-making with the public bringing forward more local and independent sources of information and alternative management strategies (Beckley et al., 2006).

Public participation can take different forms. Individuals and non-governmental actors may contest urban forest decision-making (e.g., through public consultation forums), organize towards collective action, or form collaborations with government to advance urban forest agendas. The latter, intersectoral collaborations among diverse public, private, and civic actors, is a critical dimension of urban forest governance. Collaborations are the processes whereby voluntary and autonomous organizations work towards a determined solution to a mutually shared problem while maintaining independent decision-making powers (Gazley, 2008). In the context of environmental governance, collaborations among cross-sector actors strive to mobilize

and allocate the knowledge and resources of stakeholders towards a common goal and address local issues (Ferrini et al., 2017; Foo, 2018; Bodin, 2009; Gupta & Koontz, 2019). The underlying belief is that the addition of multiple stakeholders and partnerships into policymaking and program-setting has the potential to improve environmental management (Romolini et al., 2016).

However, collaboration in governance is nuanced, often representing a diversity of authority and influence. While these methods open forums to a variety of positions, interests, and values, they may be incompatible, hindering the ability to reach consensus (Randolph & Bauer, 1999). The addition of certain external actors may bring no discernable benefit or positive outcomes to the arrangements (Wright & Andersson, 2013; Gupta & Koontz, 2019). When attempting to assess the contribution of collaborative efforts, the difference between success and failure is often unclear because of the large number of stakeholders (Kozová et al., 2018). Despite its challenges, deliberation is required to achieve representative democracy (Buizer & Herzele, 2012).

1.3 NGOs-Government Collaborations

The burgeoning body of literature on environmental governance has notably given way to research that analyzes isolated, local cases of urban forest governance or scrutinizes private or public actors (Giessen & Buttoud, 2014; Wirtz et al., 2021). Despite the growing scholarly attention to public participation, there remains a limited understanding of non-governmental organizations (NGOs) and their role in urban forest management (Elton et al., 2022). When welcomed into urban forest management, NGOs have proven effective in varying activities including financing, public program delivery, maintenance, advocacy, and public education (Svendsen & Campbell, 2008; Duinker et al., 2015, Cheng & Li, 2022). Advocacy in particular,

which is understood to be the attempts to influence the decisions of institutions on behalf of public interest through lobbying or indirect education and agenda-setting, is a core mission or secondary activity of many NGOs (Kimberlin, 2010). Despite these contributions, when NGOs are referenced in urban forest governance literature, they are interpreted in generic terms (see Conway et al., 2011; Watkins et al., 2018), despite their spectrum of practices, purposes, and outcomes (Wahlén, 2014).

The term NGO encompasses many different categories of organizations, including public service contractors, grassroots development organizations, and advocacy groups. This range of function is indicative of the diverse views and priorities that tend to coexist in the NGO community (Clark, 1991; Bebbington et al., 1993). There is no convenient or easily defined role of NGOs in society or position on what they should contribute to development (Bebbington et al., 1993). When participating in collaborations, the methods that NGOs engage with the civic sector are equally as diverse. Gazley (2008) explains: "government agencies and nonprofit organizations interact in a myriad ways, both formally and informally, to meet public needs, accomplish common agendas, or wrestle over definitions of common good."

Municipal governments are situated in unique positions to effectively collaborate with community-based NGOs. Firstly, policymakers are in close physical proximity to the communities effected by policy decisions. Community members may have more of a vested interest in the delivery of local infrastructure and services than those falling within the jurisdiction of senior governments. Additionally, municipal governments are able to act and make decisions more innovatively relative to other levels of government because of their small size and ability to make decisions quicker (Gabris & Golembiewski, 1996). The proximity and relationship between administrative and political leaders informs the frequency and success of

innovative municipal government transformations (Ihrke et al., 2003). These attributes of municipal government may promote collaborative governance and community problem-solving.

Literature on the topic of environmental collaborations identifies a distinction between organizations that work within existing governance processes and those that challenge them (Alcock, 2008). One view of NGO-government arrangements involves NGOs taking on the role of delivering or implementing public services funded by respective local governments (Gupta & Koontz, 2019; Cheng & Li, 2022). This supports the argument that governments are dependent on NGOs to meet community goals because of bureaucratic obstacles, insufficient infrastructure, and limited institutional capacity to provide necessary services to cities (Gray, 1985; Gronbjerg, 1987; Elton et al., 2022; Muñoz Sanz et al., 2022).

Another view extends beyond the typical purchase-of-service contract in more informal cooperative or competitive relationships, where governments are able to retain control over public services and avoid loss of accountability (Gazley, 2008). Governments may be reluctant to abdicate authority of urban forest management because the degree of influence of non-civic actors decreases government autonomy (Fusi, 2021). Meanwhile, NGOs are challenged with balancing their independence from government while maintaining working relationships that influence governmental decision-making (Cadman et al., 2020).

Regardless of the configuration, these arrangements have the capacity to contribute to or detract from overall canopy cover quality and quantity. The importance of these effective collaborations should not be understated; local-level organizational behaviour can have an impact on the policy outcomes at a broader scale (Cheng & Li, 2022). Contriving new formal mechanisms for policy participation can streamline the ad-hoc nature of existing models. To

accomplish this, there needs to be a concentrated effort towards understanding the structure, successes, and failures of existing models.

1.4 Research objectives

Despite their significance in delivering benefits and services in cities, much is still unknown by researchers and practitioners alike about the roles of NGOs in urban forest management, especially in the context of their relationships with local governments. To address the gap in existing literature and develop an understanding of NGOs and the many ways in which these groups interact with municipal governments towards local urban forest efforts, this study employs qualitative research methods that draw on the experiences of local forest practitioners.

This research was created with the purpose of accomplishing two overarching objectives. The first objective is to determine the structure of urban forest NGO and local government collaborations. To accomplish this objective, the research examines the components and configurations of collaborations including organizations' 1) mandates, 2) relationship ties, 3) accountability processes, 4) resource exchange, and 5) power dynamics. The second objective is to elucidate practitioners' perspectives towards urban forest NGO and local government collaborations. To fulfil the second objective, this research examines 1) the challenges, risks, and contributors of success in public-civic collaborations, 2) the value added and associated trade-offs, and 3) the benefits and beneficiaries.

1.5 Thesis structure

The proceeding sections are divided into three chapters. The core content of this thesis is presented in Chapters 2 and 3. Chapter 2 and 3 are written and presented as two individual journal manuscripts, with both having been submitted for peer-review publication. The first journal manuscript is presented in Chapter 2, which aims to address the first objective of

characterizing the structure of urban forest NGO and local government collaborations. Chapter 3 accomplishes the second objective by focusing on the perspectives of public (i.e., citizenry and community groups) and civic (i.e., municipal government) forest practitioners when participating in collaborative arrangements.

Finally, Chapter 4 serves as a comprehensive synthesis of Chapters 2 and 3, highlighting their key findings. By examining the results of Chapters 2 and 3 in tandem, we can determine the practical implications of this study. I make recommendations that aim to bridge the gap between research and practice, providing actions for forest practitioners seeking to improve their approach to collaborative decision-making. Lastly, it proposes using the findings of this work as a launchpad for future research inquiries in the domain of urban forest NGOs and cross-sector collaboration.

Chapter 2: Characterizing non-governmental organizations and local government collaborations in urban forest management across Canada

This chapter has been submitted for peer review and publication in Environmental Management, co-authored by Tyler C. Doucet, Peter N. Duinker, Melanie Zurba, James W.N. Steenberg, John D. Charles.

Abstract

Urban forests are being threatened by rapid urbanization, biodiversity crises, and climate variability. In response, governments are increasingly collaborating with the public for solutions to these mounting challenges. Non-governmental organizations (NGOs) are dominant players in these collaborations because of their ability to deliver on communities' environmental and social issues. Despite their growing visibility in urban forest management, research in this domain is nascent. There is a lack of attention directed to the structure of non-governmental relationships and the range of collaborative activities. This study focuses on addressing these gaps and examining collaborations between local governments and NGOs in Canadian urban forest programming by characterizing their components including mandates, relationship ties, accountability, resource exchange, and power dynamics. We collected data using semi-structured interviews with three groups: leaders of NGOs, municipal government officials in urban forest, parks, or public works departments, and urban-forest experts who have observed how NGOs and governments interact. The participants represent 32 individuals in nine Canadian cities. Our results indicate that NGO-government collaborations have relational ties and accountability processes that are both formal and informal in nature; however, formality in collaborations is associated with the amount of funding, proximity to government, or size of the NGO. Additionally, our findings suggest that given adequate support, NGOs present an opportunity to

local governments to supplement their resources and capacity. As such, while the strength and formality of collaborations may be a product of NGO size and budgets, public servants should not hesitate to engage smaller, grassroots NGOs to realize their public service mandates. Characterizing the components of these governance processes provides a benchmark for practitioners participating in similar public-civic interactions. This research has the capacity to arm all governance actors with the tools and knowledge to navigate these collaborative actions and streamline urban greening efforts.

Keywords: urban forestry; urban forest governance; non-governmental organizations (NGOs); public sector; cross-sector collaboration; public participation.

2.1. Introduction

Urban forests are priceless assets in cities due to the myriad biophysical and socioeconomic benefits they provide to expanding urban populations (Uçar et al., 2020; O'Brien et al., 2022). To meet the growing demand in cities for resilient and healthy forests, local governments are increasingly taking action for urban greening through tree planting programs and other green infrastructure initiatives (Conway et al., 2021). However, successfully implementing urban forest management plans and policies is not only dependent on government efforts and resources, but also requires collective decision-making, public trust, and coordination among stakeholders (Ordóñez et al., 2020; Ordóñez Barona et al., 2023). Fragmented management structures can limit knowledge exchange and retract from overall urban forest efforts (van der Jagt & Lawrence, 2019). On this account, local governments are engaging public actors more frequently and meaningfully in urban-forest management.

Forest management refers to designing and implementing a set of actions in pursuit of a forest conditions that are deemed to be desirable over a specific period of time (Erdle & Sullivan, 1998). In the context of urban forestry, management implicates the structure and composition of canopy cover, species diversity, forest connectivity, and ecosystem service procurement (Ordóñez & Duinker, 2013). Inversely, governance can be defined as the rules, processes, and interactions among stakeholders that influence collective decision-making, behaviours, and outcomes (Graham et al., 2003; Lemos & Agrawal, 2006; Devisscher et al., 2022). More broadly, environmental governance "is about power, relationships and accountability: who has influence, who decides, and how decision-makers are held accountable" (Graham et al., 2003, p.2).

Scholarship on natural resources governance suggests that there are many reasons to engage civic actors in forest management (Buijs et al., 2016). Collaborative efforts in natural resource management can foster trust and generate greater social acceptance of government decision-making (Beckley et al., 2006). The presence of actor networks in urban forest programming may promote better knowledge and resource exchange, allowing practitioners to succeed in the face of management challenges (Ordóñez Barona et al., 2023). Additionally, it is theorized that active inclusion of the public in the political arena reconnects residents to their governments and empowers communities (Weber, 2000). Non-governmental organizations (NGOs) specifically, including non-profits, charities, and social enterprises, are helpful in the delivery of community goals. NGOs have the potential to bring social and ecological benefits to their respective cities (Elton et al., 2022). In the face of greater ecological challenges and major disturbance events, strong collaborations with NGOs are considered important for meeting the local needs of the urban forest (Konijnendijk et al., 2021).

Despite their documented benefits, collaborations in urban-forest governance are complex and present challenges to stakeholder groups in practice and characterization. Inherently, NGOs are required to interact with other groups to build their capacity and generate necessary resources to realize their mandates (Nordin et al., 2022). NGOs collaborating with their local governments must balance maintaining agency from government while simultaneously working closely enough with government to influence public-sector decision-making (Cadman et al., 2020). Further, the horizontal structure of such public-civic collaborative activities may increase delays in service provision. Therefore, it is important to develop an understanding of different actor and sector arrangements to mitigate gridlocks (Foo, 2018).

However, these challenges could be mitigated through changing configurations of network ties to improve and streamline the management enterprise (Bodin & Crona, 2009).

When attempting to understand the configurations of collaborative processes and their resulting impacts, their variety proves challenging. The diversity in local government and NGO collaborations, including their organization and intensity, complicates our overall understanding (Gazley & Guo, 2020). Additionally, when local governments are funding and contracting public goods and services to NGOs, the boundaries between public and private become blurry (Smith & Lipsky, 1993; Fisher, 2014). While the current scholarship on cross-sectoral environmental management and decision-making is abundant, it has striking variations across fields and geographical extents. With respect to urban-forest NGOs, specifically their structure and function, the academic literature is nascent.

The field of urban forestry is interdisciplinary – it possesses both biophysical and social underpinnings and thus requires diverse forms of evaluation – including drawing on qualitative narratives (Wahlén, 2014). Therefore, to address these gaps and develop a more fulsome understanding of NGOs and the many ways in which they interact with local governments towards urban-forest efforts, this study employs qualitative research methods to determine the experiences of local forest practitioners. Specifically, the study analyzes the structure of collaborations between local governments and NGOs in Canadian urban forest programming by examining their components including mandates, relationship ties, accountability, resource exchange, and power dynamics.

2.2. Theoretical background

Decentralization of decision-making is characteristic of modern natural resource governance (Duinker et al., 2015). Decentralization implies a degree of power transfer, from

senior levels of government to local communities – resulting in the empowerment of non-governmental actors (Raik et al., 2008). Despite contemporary forest management seeing greater inclusion of non-governmental actors such as NGOs (Sheppard et al., 2017; Foo, 2018), power asymmetries are still reflected in practice (Konijnendijk van den Bosch, 2014). Power imbalances are perpetuated because the rules and practices that regulate how participation and decision-making unfold are often conceived by those with existing political legitimacy (Adger et al., 2003). While NGOs have proven capacity to participate in policy proceedings (Elton et al., 2022), these groups may not be presented with the opportunities to do so (Evans & Wellstead, 2014).

When NGOs do collaborate in decision-making processes with their local governments, the forms of collaborations vary in formality. Guo & Acar (2005) define informal collaboration as organizations refraining from making ongoing commitments and exercising agency over an individual organization's managerial decision-making. Inversely, formal collaborations are characterized by maintaining ongoing relationships and the pooling of services and resources. Scholarship on NGO-government relations has historically focused on the latter rather than informal relationships that exist outside of the contracting arrangements (Gazley, 2008). For that reason, more research is needed to understand the role and impact of informal relationships in this domain.

Formality in collaborations can inform the presence or absence of accountability measures. Non-civic actors' involvement in addressing government shortcomings in their services improves overall accountability (Jedd & Bixler, 2015) because the addition of NGOs in environmental management requires an adherence to norms and standards (Smith & Lipsky, 1993). Discussing accountability both in theory and practice can contribute to more resilient and

streamlined governance arrangements (Kraft & Wolf, 2018). However, ensuring accountability towards collective goals is challenging, particularly because performance measurement tools are insufficient in quantifying public impact and their resulting outputs (Denhardt & Denhardt, 2015).

Another core tenet of many NGO-government collaborations is the exchange of resources. The intersection of power and resource exchange is discussed within organizational behaviour and cross-sector collaboration literature at great length. At the nexus of power and resource exchange discourse is resource dependency theory (RDT) which assumes that organizations participating in coalitions will modify their structure and behaviours to acquire external resources (Pfeffer & Salancik, 1978; Ulrich & Barney, 1984). Under RDT, power is understood to be the exertion of control over resources (Ulrich & Barney, 1984).

The exertion of power and control over resources is reflected in government-NGO relationships. NGO vulnerability is largely influenced by the extent to which they are reliant to exchanges with external agents for their operations (Pfeffer & Salancik, 1978). In fact, NGOs forfeiting their mandates to garner government support and resources has led to skepticism about NGOs operating in public service spaces (Smith & Lipsky, 1993). Leach (2018) implies that NGO participation in cross-sector collaborations is contingent on their degree of acceptance of the prevalent policies of local governments, leaving NGOs compelled to conform to specific policy arrangements.

Conversely, governments are dependent on the non-profit sector because of their insufficient institutional capacity or infrastructure to provide necessary services to cities (Gronbjerg, 1987). While extant theory would suggest that governments are reliant on the public to meet their own policy agendas, new public service (NPS) theory argues that public servants'

roles have evolved into assisting citizens to identify and fulfil collective goals, rather than their own public mandate (Denhardt & Denhardt, 2000). Under this collaborative approach, governments are engaging active citizenship to strive for what is deemed important by and beneficial to the wider public (Bryson et al., 2014).

RDT and NPS have been applied widely in public sector management literature across scholarly disciplines but seldom in the context of urban forest management and governance. Urban forest governance does not exist in vacuum from the theoretical and practical trends present in cross-sector collaborations. As such, this research draws on these theories to interpret the many cases where the explored governance components intersect one another.

2.3. Methods

2.3.1 Approach

Our approach to this research employed semi-structured interviews. This study was national in scope, representing nine cities across Canada. Criticism on existing environmental NGO literature suggests that current thinking in this domain tends to generalize NGOs, missing their varied ideologies and organisational forms (Wahlèn, 2014). Further, Gazley & Guo (2020) report a sampling error in studies of collaborative NGO activities, in which success is often represented over collaboration failures, leading to a "survivorship bias". In response, this study sought to achieve both heterogeneity among its sample NGOs and NGO-government arrangements, where a range of programming, collaborative activities, mandates, and sizes are represented, as well as balance in the search for successes and challenges.

2.3.2 Recruitment

The first step was to inventory the current urban-forest NGO presence in Canada. Appeals for names of urban forest NGOs were sent through various networks, including the

Canadian Urban Forest Network listserv (CANUFNET), social media networks (e.g., LinkedIn), and emails to professionals in the field. The initial appeals identified 61 NGOs across Canada. Inclusion criteria were developed for NGOs as follows: a) organizations whose primary focus is urban forestry, b) registered as a non-profit or charitable organization, and c) interacts with an urban forestry, parks, or similar public works department in local government or works in governance affairs in some capacity.

Of the 61 NGOs, 21 NGOs met the defined inclusion criteria. We performed further inquiry through desktop research to determine NGO characteristics such as size, key interests, duration of service, budget and funding sources, and levels of involvement in government affairs. The cities chosen to be profiled represent a range of these factors with a focus also on geographical representation. The sample pool captures NGOs that operate under diverse local and regional regulations, ordinances, and diversity among native tree ranges in Canada. The study sampled 13 unique NGOs in nine cities (the cities are not named here to keep confidential the identity of interviewees). While six provinces are represented in the study, there is a concentration of case cities in Ontario (see Table 1). This is representative of the relatively high number of urban-forest NGOs operating in some regions of Canada (e.g., southern Ontario cities) and a comparatively lower number in others (e.g., Atlantic Canada). All but one of the cases were active collaborations. Three participants were chosen to speak about an NGO that no longer exists in our attempt to mitigate "survivorship bias".

2.3.3 Participants

The study population is urban forest experts and practitioners from urban forest NGOs, local government, and when present, other expert observers. Expert observers consisted primarily of academics, but additionally included an independent consultant, a small-business

owner, and a city Councillor. The inclusion of expert observers offered an independent, third-party perspective and a more fulsome account of each collaboration.

Specific participants within the selected NGOs were identified based on their expertise, contributions to decision-making within their organization, and knowledge of the networks connecting NGOs and municipalities. Following identification of participants within NGOs, snowball recruitment was used to identify their contacts within local government and relevant expert observers. Snowball sampling is a form of non-probability sampling in which initial participants are used to establish contact with other prospective participants (Bryman et al., 2012).

In total, there were 32 participants across nine Canadian cities and six provinces – Ontario (n=13), Quebec (n=6), Saskatchewan (n=4), Manitoba (n=4), British Columbia (n=3), and Alberta (n=2). Generally, provinces with a greater urban forest NGO presence had a higher number of participants. The distribution of participants is represented by provincial geography rather than municipal to protect the anonymity of participants who may be identifiable within their municipalities by their role. The distribution of roles of participants were NGO leaders (n=15), government officials (n=9), and expert observers (n=8).

Table 1: Distribution of participants by role and province

Province	Role	Number of participants
Ontario	NGO leader	4
	Government official	3
	Expert observer	6
Quebec	NGO leader	3
	Government official	2
	Expert observer	1
Saskatchewan	NGO leader	3
	Government official	1
Manitoba	NGO leader	2
	Government official	1

	Expert observer	1
British Columbia	NGO leader	2
	Government official	1
Alberta	NGO leader	1
	Government official	1

2.3.4 Data Collection

Participants were asked to engage with the lead author in a semi-structured interview of 1.0-1.5 hr duration. In total there were 30 interviews and 32 participants (two interviews consisted of two participants each). All but one interview was conducted in English, with one being conducted in French with the assistance of a translator. Offering the interviews in either English or French ensured that language was not a barrier to participation. The interview questions pertained to four broad categories: 1) local NGO presence, 2) the structure of public-civic collaborations, 3) public-civic collaborations in practice, and 4) opportunities, limitations, and barriers to collaboration.

Interviews took place from April 2022 to December 2022. The interviews occurred remotely through video conferencing software Microsoft Teams, Zoom, or a phone call dependent on the participant's preference. Conducting interviews remotely allowed for an appropriate representation of participants across Canada. Offering multiple media ensured that technological considerations were not barriers to participation. The interviews were recorded and transcribed using online transcription software. When accessible, we reviewed public NGO and government documents for additional insights. Documentation included contracts, press releases, websites, and internal documents, such as project and funding proposals.

2.3.5 Data Analysis

The interview transcriptions were put into NVivo 12. NVivo 12 is a computer-assisted qualitative data analysis software used to facilitate the coding and retrieval of data and forming

connections across these data (Coffey et al., 1996; Kalpokas & Radivojevic, 2022). We used a thematic analysis drawing on a hybrid approach of deductive and inductive coding (Fereday & Muir-Cochrane, 2016). Codes were developed *a priori*, based on the research questions and relevant theoretical concepts in forest governance literature. While coding was informed by these categories, it was not restricted to them; as new themes arose, inductive codes were developed. Coded responses were analyzed for commonalities and divergences along different variables, including structures of collaboration, geographic locations, roles of participants, levels of participation, and amounts of funding.

Characteristics of NGO and government collaborations arose from participants' narratives during semi-structured interviews. Five characteristics are explored in this analysis: 1) mandates, 2) relationship ties, 3) accountability, 4) resource exchange, and 5) power dynamics.

2.4. Results

2.4.1 Mandates

A sentiment was shared among participants that having mandates that align is important in high-functioning collaborations, particularly when working towards specific deliverables. Further, parties should be cautious that they are aligned from policy or program formation down to implementation. OBS-4 theorized: "*aligned mandate is everything… the goals need to be aligned all the way down, from policy to implementation"*

While the proximity to a local government may inform mandates, NGOs are legally distinct and separate entities from cities. NGOs are entitled to their own mandates, which may prove divergent from their respective local government's mandates. Urban-forest NGOs have distinct variations in their functioning and forms and consequently their mandates and strategic priorities range. While some studied NGOs have focused localized mandates of one area,

greenspace, or forest, others are more broad-based in nature with mandates that are citywide. Many participants expressed the importance of NGOs maintaining independent mandates, e.g., "*ideally [the vision] is independent from government, otherwise [the NGO] becomes an arm or branch of the government*" (OBS-2).

Conversely, local governments' mandates are considered more complex compared to individual NGOs' specific and narrower mandates because of competing priorities in municipal decision-making. Overwhelmingly, participants mentioned that local governments are accountable to many different groups and thus are weighing their priorities against other kinds of needs. NGOs mentioned: *"[the city] has an obligation to so many groups, and one of those groups is developers"* (NGO-12), and similarly a government participant expressed that *"city mandates are more complex and nuanced … there are more priorities than one area. We need road networks and other services which sometimes come in conflict with protecting places … how do you weigh that against other kinds of needs that impact places"* (GOV-2).

Government and NGO participants seldomly considered their mandates to conflict with one another. However, there is a range of alignment with some citing strong alignment to others stating they perceive their mandates to be divergent or independent from one another. NGOs and their respective government collaborators may possess differences in opinions about the degree to which they share similar mandates, but these discrepancies often lie in the specifics of their mandates rather than the broad, bigger picture. Broad mandates include "*greening the city*", *"tree health"* or "*increase canopy cover*". NGO-1 observed: "*government doesn't have a mandate to educate people … they are a functional, safety kind of department"* whereas their collaborator surmised "*the same end goal, to preserve canopy and reduce incidence of disease*" (GOV-1).

Those participants who felt their mandates were heavily aligned often had a set of predetermined goals or targets both parties are working towards, such as an urban forest management plan (UFMP) or other government strategies or plans (e.g., climate plan). Plans and policies seem to give both groups means and methods to work collaboratively. Interestingly, participants in observer roles (OBS-2, OBS-3, OBS-4, OBS-7) frequently found the two actors' mandates to be divergent or not aligned, even in cases in which NGO and government participants felt aligned.

While NGOs are entitled to their own mandates, having to adjust their goals toward those of government as well as mandate drift are common among study NGOs. One participant observed: *"[the government] will only finance things that align with their primary mission as well.",* ergo the result may mean that NGOs are adjusting their mandates. NGO-6 stated: *"the government offers us money to do this and [the money] takes us a little bit over here".*

2.4.2 Relationship ties

Participants described various types of relationships and relational ties with their respective collaborators. Relationship ties exist on a continuum from informal to formal. These ties are frequently challenging to characterize because NGOs hold relationships of varying degrees at both the government staff and city Council level.

Formal relationship ties consisted primarily of contracts, memoranda of understanding (MOUs), funding agreements, entrenched programming, and continuous reporting on deliverables (e.g., through biannual meetings). Formal relationships can mean NGOs receive official government recognition as a stakeholder.

Informal relationship ties consisted of social threads, precedents of interaction and rapport, or a one-off, program-specific relationship. These ties are reliant on specific individuals,

as observed by NGO-3: *"it is a person to person [relationship] as opposed to an organization to organization [relationship]".* There is more volatility in informal ties with participants sharing difficulties replacing social threads and the risks associated with a high staff turnover rate.

The majority of participants mentioned that they collaborate through both formal and informal means. The formalized systems are partnered with informal, often longstanding social threads that have developed through working with staff. Because of the uncertainty surrounding the roles of NGOs in urban forest management, there are benefits to formalizing relationships with MOUs or partnership agreements, even with groups receiving marginal or no funding.

The formality of relationships is determined by the amount of funding, proximity to government, or size of NGO. The collaborations with more layers or systems of formality in place are those receiving substantial funding from government. Collaborations at lower levels of participation (e.g., solely exchanging information) do not have formal checks and balances in place. Finally, *"neighbourhood- or park-specific NGOs often have more informal relationships"* (OBS-2), an observation that could be a product of a number of factors, including government perceiving that these smaller informal groups have less legitimacy or credibility.

2.4.3 Resource exchange

Mutual benefit is characteristic of successful collaborations. Participants were generally able to identify resources brought forward by both NGOs and governments. Resource exchanges between these groups help realize both short- and long-term objectives. While funding was most frequently discussed in resource discourses, many non-tangible resources are seen as vital to collaborations and the functioning and composition of urban forests. Participant GOV-3 shared: *"having something to bring to the table doesn't have to be money. Let's say, for instance, the nonprofit has access or has partnership [with] a certain landowner that they can deliver on and*

they have expertise and capacity to deliver a planting event. They have something I don't have. They have value to something that benefits the broader city that has a huge public benefit, that is something I don't have."

In the absence of offering consistent funding, many NGOs are reliant on offering more non-tangible resources. NGOs contribute knowledge, such as offering government a pulse on the community, feedback, and technical expertise. Technical expertise is particularly significant to and frequently mentioned by participants in smaller or mid-sized municipalities. In the absence of larger urban forest management budgets and specialized teams, small municipalities turn to their NGOs for technical knowledge and expertise. GOV-6 conveyed the value of this: *"I'm not at all a specialist in urban forests, but I have an organization that specializes [in it], which has masters and doctorates".* NGOs offer data including contributing to municipal open datasets. Additionally, NGOs offer human resources in the form of volunteers. NGOs have the unique ability to organize communities and mobilize volunteers.

According to participants, funding provision is overwhelmingly associated as a government resource. However, NGOs are also contributing substantially to funding acquisition. Participants in all sectors spoke to a financial incentive to collaborating with NGOs. Many of these groups are matching and furthering government contributions – ultimately producing a large return on taxpayer dollars. This is largely in part because NGOs have access to public and private funds that municipal governments do not, as well as experience in navigating granting processes.

Participants associated local governments with a wide range of offerings but most frequently monetary resources. While not all governments fund their respective NGO collaborators, many local governments do so on a large range from nominal to substantial

funding. However, participants mentioned that there are specific terms to government funding. Governments are paying to realize their mandates and thus the money is being allocated for specific services. Therefore, planting or education programming is frequently funded, while advocacy work seldomly receives funds from governments.

While participants often associate government resources with financial backing, governments also bring forward material support such as trucks, other vehicles, equipment, access to public land, and access to office space. Governments are providing intellectual resources, such as knowledge – on policies or the structure of local governments, technical expertise or feedback – and data. NGOs may not have the resources or capacity to perform large-scale data collection and some turn to government to perform those duties. Finally, while NGOs are more commonly associated with volunteerism, participants mentioned that government staff do frequently participate or volunteer in NGO programming.

2.4.4 Accountability

Collaborations have different layers of accountability that inform their structure. Reporting structures, contracts with timelines and deliverables, legal agreements, appeal processes, regular meetings, stakeholder meetings, and performance reviews were all mentioned as increasing transparency and accountability in collaborations.

Accountability processes implicated both respective collaborators as well as external actors. Participants claimed that local governments' accountability to public citizens informs the structure and pace of collaborative activities. Local government officials are obligated by the public to be *"proactive in their public discourse around funding"* (GOV-3) so as not to misappropriate public funds and are ultimately restricted around their policy decisions. As stated by GOV-7: *"the landscape is too important for us to abdicate it to people [who] don't really*

know what they are doing." Beyond their responsibilities to the public, participants identified an additional layer of accountability being local government staff's reporting and obligation to city Councils. OBS-9 claimed: *"cities are constrained, in part by city Councils. NGOs can do what they want…NGOs can make a lot of noise because they're not constrained in the same way, right? I think the cities have lots of competing forces".* Local governments are having to justify funding decisions and prove that NGOs are achieving the purpose of their grants.

Local governments' have multiple layers of accountability – internally between public staff and city Council and externally to the public. This accountability extends to NGOs – which are often required to meet rigorous reporting processes when receiving government funds. NGO participants felt that much time is spent *"reporting, justifying why you're asking for money"* (NGO-10). OBS-3 commented *"[the] government doesn't gift money, because it's accountable to public… you can't have just anyone doing what they want with government funds*".

Participants, particularly those partaking in funding arrangements, often communicated ways in which NGOs are accountable to their local governments without acknowledging any processes that held government accountable to their NGOs. Overwhelmingly, accountability was perceived as one-sided where *"[the] city is not accountable to the NGO, but NGO is accountable to the city"* (NGO-1). While some government participants mentioned formal and informal systems in place that hold them accountable to their respective collaborators (GOV-3, GOV-4, GOV-7), NGOs seemed unaware that these systems existed or how to navigate them. Inversely, NGOs that received nominal or no funding shared that they hold their respective local government accountable through their advocacy efforts. In the absence of funding, NGOs have more freedom to contest government decision-making.

Despite the trade-off of accountability creating gridlocks in operations and decision-making, some participants did express a desire to develop more formalized accountability processes to mitigate the obfuscation of deliverables and outputs. Further, formal accountability would create better articulated roles and rules surrounding partnering. NGO-1 mentioned: *“"if there is accountability and a requirement to check in once a month to say, this is what we did for the project, even if it's nothing... would have been so beneficial”.* Government participants maintained: *“[I] would like to vision and articulate on paper everyone’s expectations and what you gain out of being a partner… most people think if it’s not broke, it’s good”* (GOV-2) and *“there is a lack of accountability… the absence of internal audit means a lot of things are taken on trust”* (GOV-8).

Additionally, there was a lack of evaluation in collaborations, where both parties felt satisfied so long as deliverables were being met, regardless of whether the collaboration modality was efficient and productive. NGO-3 mentioned: *“we have been coasting for years and have not critically re-examined it in a long time... Why is it these members? What are the roles?”*

2.4.5 Power dynamics

Variations existed among participants’ perceptions surrounding the inherent power dynamics in their collaborations. Government funding and public land ownership was seen as perpetuating power imbalances between the two groups. NGO-5 stated: *“there is a sense that cities hold all the power, so we are sort of at their mercy to a degree. We are resourceful but ultimately there is just this power imbalance when grant money is involved.”* This balance does not favour NGOs and can lead to self-censorship and modifying mandates or agendas. Many NGO participants spoke to examples of a perceived suppression or censorship – particularly associated with their advocacy efforts. NGO-13 expressed: *“at a subconscious level there is self-*

regulation, when they are your biggest funder, it's hard to be overly harsh". However, multiple government participants (GOV-1, GOV-3, GOV-6) did add that both parties are willing partners and NGOs can and do make conscious decisions about their funding sources. The following interviewee summarized this sentiment:

"…it requires two willing partners. Is there a [power] dynamic? Yes... the choice ultimately sits in the non-profit's lap. There are examples of non-profits who are not reliant on government funding that have made a deliberate decision to diversify the revenue sources to ensure that government funding may only be a very, very small percentage of it." (GOV-3).

Government funding may drive individuals and organizations to feel beholden to their local governments. However, power and controls still do exist, even in the absence of funding. Local governments may maintain no authority over NGOs' decision-making but still control the nature of the collaboration. A non-funded NGO participant shared: *"if they want to meet you, they'll meet you … that's sort of the closed-door policy. It's challenging."* (NGO-4). The decision of whether to and how to engage an NGO still rests with local government officials.

Power dynamics may present themselves almost innocently with a strong sentiment among some government participants that they want NGOs to build autonomy over time. NGOs are autonomous, legally distinct, and self-governing. In fact, NGOs having an independent voice and maintaining agency was considered important by participants in all sectors. Interviewees revealed: *"[they] don't want to be the city's mouthpiece"* (NGO-12), *"having independent NGOs, like truly independent NGOs, that are open to working with municipalities, I think is valuable."* (OBS-2) and *"[we are] trying to have the groups be as independent as possible, not having dependency be built up on the city because then we really will run out of capacity very quickly"* (GOV-7).

NGO participants who felt greater agency in collaborations were groups in which governments were reliant on them to fulfil their mandate (e.g., opening access to private lands) and groups that had diversified funding – meaning they were not solely reliant on government funds. Further, formal accountability processes including deliverable agreements have the capacity to generate a greater sense of autonomy among NGO groups. In these cases, local governments held their collaborator accountable to their results and outputs but gave NGOs freedom to pursue their management decisions and processes. This modality is described by GOV-9: *"It's really like they manage their own things. We're not involved. We give money and they're accountable".*

2.5. Discussion

This study aligns with a longstanding body of literature that NGOs play a vital role in the execution of public services (Gronbjerg, 1987; Buijs et al., 2016; Fyall, 2016). The process of establishing public priorities around services and policies, however, is a give-and-take between government and NGOs. Establishing collective goals is not as common a practice as understood under NPS theory. In many cases, NGOs and governments maintain their distinct mandates and draw on the resources and expertise of their counterparts to help realize their goals. In other instances, collaborative efforts are focused towards realizing the targets outlined in municipal plans. Through their concentrated efforts, the NGOs included in this study have influenced aspects of the municipalities' urban forest practices. Inversely, as previously documented (Smith & Lipsky, 1993; Leach, 2018), some governments are seen driving change in the mandates of NGOs – often unconsciously – because of a reliance on government resources.

The control over resources in funder-recipient relationships informing NGO behaviours is characteristic of RDT (Pfeffer & Salancik, 1978; Ulrich & Barney, 1984). Responses signaled

that not only does this lead to modifying mandates, but also a level of self-censorship. In the context of this study, this presents itself explicitly, e.g., *"the municipality pays us to fulfill their mandate"* (NGO-11) or implicitly, e.g., *"there [are] all kind of challenges working in the nonprofit sector with mandate drift and having to adjust your goals to what the government's goals are"* (NGO-6). To remediate this, participants across sectors expressed the importance of NGOs building autonomy and diversifying their funding wherever possible.

It is worth noting that resource exchange is not asymmetrical, and both government and urban-forest NGOs have a role in acquiring intellectual, material, human, and financial resources. Our study demonstrates that the addition of cross-sector collaborations in urban-forest management generates more resources and furthers public funds through NGO fund-matching and volunteerism. Conversely, in specific instances, public participation processes can exhaust government resources, particularly with new NGOs that have a lower capacity to deliver on their operational goals and require more guidance. In response, Bryson et al. (2013) promotes collaborative processes where governments support citizens with required resources while managing collaborations to garner more resources that ultimately offset the associated time, capacity, and resources associated with collaboration.

Moreover, our research determines that despite operating in similar spaces, urban-forest NGO-government collaborations maintain striking structural variations in terms of their components. These results corroborate existing cross-sector collaboration literature that point to diverse collaborative forms across non-profit disciplines (Gazley & Guo, 2020). Understanding their varying forms is important for individuals embarking in cross-sector partnerships, as the addition of government or NGOs in collaborative governance does not automatically or inherently add value or capacity to either group (Shumate et al., 2018; Evans & Wellstead, 2014;

Wright & Andersson, 2013). With a pronounced increase in the number of urban-forest NGOs (Elton et al., 2022), more attention is being paid to effective and streamlined forms of collaboration with individuals questioning the roles each actor plays in these partnerships. For example, OBS-2 explained: *"there does need to be consideration for what is the role of the municipality in terms of the entire urban forest"*.

It is useful to develop a common understanding of the roles actors play when engaging one another in urban-forest management. However, for many participants it was not observed as a standard practice. Participant responses indicated that there is uncertainty around the responsibilities and rights associated with working in collective arrangements. While formal relationships are generally more likely to have articulated roles through contracts or MOUs than their informal counterparts, formal relationships and articulation of roles are not systematically related. The creation of a set of rules may guide operational decision-making and inform which actors get to be involved in decision-making and in what ways (Bryson et al., 2013).

Our study finds that collaborations exist on a continuum, with many having both informal and formal layers to them. Participants in formal arrangements often remarked about informal, social threads. The formality of relationships was associated with the amount of funding, proximity to government, or size of NGO. Our findings align with those of Guo & Acar (2005) who find that the likelihood of formal collaboration increases with budget size and level of government support. The results demonstrate that collaborations with more layers or systems of formality in place are more likely to be receiving substantial funding from government. Formal, longstanding contractual agreements, funding arrangements, and entrenched programming are of particular significance in the urban forest sector, where the timeframe for trees is decades.

Our research also demonstrates that NGO-government collaborations exist outside of traditional funder-recipient arrangements. However, without the exchange of funds, NGOs tend to operate on more of an ad-hoc, informal basis with their respective local governments. This may perpetuate the precarious role of NGOs in urban-forest management or further compromise the legitimacy of NGOs operating in this space. This is of particular concern among urban-forest NGOs as many of these groups operate as grassroots or neighbourhood organizations without any operational budget or guidance (Elton et al., 2022). In the absence of longstanding agreements, programming may lack continuity, and hinder NGOs from realizing the long-term impact of their work.

Further, informal relationships may present other challenges, for instance limited coordination or access to select resources such as knowledge and data (Fusi, 2021). In informal relationships, the volatility of social ties is of particular concern. Collaborations that emphasize lower levels of participation (e.g., solely information exchange) do not have formal checks and balances in place but instead rely solely on the trust and goodwill of the participants involved. Evans & Wellstead (2014) advocate for creating new, formal mechanisms for NGO engagement in policy-setting to avoid the challenges of ad hoc collaboration models. Shumate et al. (2018) go further to suggest that building relationships between governments and NGOs that extend beyond funder-recipient relationships is related to greater strategic planning capacity.

While the strength and formality of collaborations may be a product of NGO size and budgets, public servants should not be hesitant to engage smaller, grassroots NGOs or NGOs whose primary function is advocacy to help realize their urban-forest mandates. Responses corroborate existing literature that NGOs can and do voice government preferences and advance civic mandates (Fyall, 2016). As GOV-2 mentions: *"they can say things that our staff would not*

say because they have a different logo." In doing so, they are widening the base of individuals advocating for urban forest efforts (Konijnendijk van den Bosch, 2014).

2.6. Strengths and Limitations

This study's methodological strength lies in its national distribution and range in NGO characteristics. We sought to acquire a sample of NGOs that vary in experiences, sized, key interests, durations of service, budget and funding sources, and levels of involvement in governance affairs. To further mitigate any bias, the study draws on the perspectives of multiple individuals across different sectors involved in collaborations. The addition of observer participants offers a third-party perspective which provides a more fulsome account of the collaboration.

However, the study is not without its limitations. Cook et al. (2017) note that NGO presence is not randomly assigned but rather concentrated deliberately in areas of political responsiveness. In other words, the localities of NGOs across Canada could bias the study's results such that urban forest management in populous Canadian cities get more visibility. While we attempted to gather data from individuals across Canada, there was a limited number of urban-forest NGOs that fit our inclusion criteria operating in some regions (e.g., Atlantic Canada) and a comparatively high number in others (e.g., Ontario). Additionally, there is not equal representation of participants across sectors.

The geographical distribution of the study represents cities of different populations, land areas, urban density, forest areas, and local and regional regulations and ordinances. However, urban forest decisions need to be tailored to the unique needs and circumstances of different municipalities. This study is exploratory in nature, and as such, presents themes that could be studied at great length under different scales and localities.

2.7. Conclusion

In a Canadian context, NGOs are increasingly partnering with government to address threats of development, climate change, pests and diseases, and poor management of the urban forest. While these groups are garnering attention in urban forest management, research in this domain is moving at a much slower pace. In response, this study analyzes various structures and configurations of NGO-government collaborations to determine the characteristics of high-functioning and efficient partnerships.

Our findings suggest that NGOs, given adequate support, present an opportunity for municipalities to supplement their resources and capacity. To achieve the greatest return on the time and resources dedicated to collaborations, actors should ensure that their mandates and visions align, particularly when working towards a specific set of deliverables. NGOs and governments alike should be held accountable to the results of collaborations. Further, we argue that developing more formal processes, regardless of funding relationship, in which all actors are familiar with their collaborators, roles, and the constraints operating on their collaborators would benefit the delivery of collaborative activities.

Simply increasing funding and resources alone is not sufficient to overcome the barriers associated with urban forest management and policy-setting. Rather, urban forest initiatives require a more comprehensive approach that involves understanding civic and public actors and the ways they interact towards collaborative decision-making (Driscoll et al., 2015; Ordóñez et al., 2023). The critical analysis of urban-forest management and governance can identify inefficiencies and challenges in these processes, arming urban-forest practitioners with a benchmark for successful collaboration.

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Chapter 3: Perspectives of successes and challenges in collaborations between non-government organization and local government on urban forest management

This chapter has been submitted for peer review and publication in Urban, co-authored by Tyler C. Doucet, Peter N. Duinker, Melanie Zurba, James W.N. Steenberg, John D. Charles.

Abstract

Local governments are increasingly collaborating with citizenry and nongovernment organizations (NGOs) in urban forest management because of the underlying belief that these groups contribute to the quality of urban environmental services. However, in practice, the successes, challenges, and outcomes vary drastically by collaborative arrangement; solely documenting positive outcomes in NGO-government collaborations may hinder the ability to mitigate their associated downsides rather than biasing collaborative behaviours towards success. This study draws on the experiences of urban forest professionals across nine Canadian cities who have participated in or observed NGOs and local governments engage in collaborative urban forest management. We employed semi-structured interviews with 32 participants from three groups: leaders of NGOs, municipal government officials, and urban forest experts who have observed the two parties interact. Our results demonstrate that the addition of NGOs in municipal forest management is associated with positive outcomes and the characteristics of relationships, individual personnel, and community support contribute to their success. We also characterize the barriers that collaborators are tasked with navigating in order to achieve positive outcomes, including high employee turnover, siloed departments, competing priorities, shifting politics, and precarious funding and contracts. Our recommendations for successful NGO-government collaborations include arming stakeholders with a thorough knowledge of civic

processes, diversifying political relationships, fostering "champions" among a greater number of involved parties, and participating in longer-term contracts and funding agreements. Further, involved parties should ensure they are working towards the equitable distribution of the benefits and outputs of urban forest collaborations. Moving forward, because of the insular nature of NGO-government collaborations and a low capacity among NGOs to share the outputs of these collaborations, we recommend researchers continue to study the successes and shortcomings under varying governance arrangements so that groups may benchmark their collaborative activities against others and determine the most effective means of participating in co-management.

Keywords: urban forest governance; urban forest management; non-governmental organizations (NGOs); partnerships; urban environmental services; local governments

3.1. Introduction

Urban forests – the trees, forests, and associated biotic and abiotic components in cities and towns – are products of many compounding and cumulative biophysical and social factors (Roman et al., 2018). The range of factors influencing the functioning of urban forests makes pinpointing the specific impacts of different variables challenging. However, it has been documented that the policies and decisions surrounding municipal forest management are particularly significant in urban forest program implementation (Clark et al., 2020; Ordóñez Barona et al., 2023). Additionally, the delivery of urban forest benefits is dependent on forest management (including planning) and the coordination of actors involved in those processes (Kozová et al., 2018). Consequently, scholars in this field have attributed the contributions of different governance arrangements to overall urban forest quality.

Recent scholarship on environmental and forest governance supports varying definitions yet overwhelmingly emphasizes a shift towards less-centralized and -hierarchical political decision-making under the influence of non-civic actors (Agrawal et al., 2008; Kleinschmit et al., 2009; Buijs et al., 2016). Governance in the context of forestry can be defined as the formal and informal rules, processes, and interactions among public and private actors that influence decision-making and behaviours surrounding forests (Graham et al., 2003; Lemos & Agrawal; 2006; Giessen & Buttoud, 2014). The execution of urban forest decisions can be initiatives carried out by local government or non-governmental organizations (NGOs), or cross-sector partnerships between public and private actors (de Guzman et al., 2022). Increasingly, NGOs – encompassing nonprofits, charities, and informal community groups – have expanding roles and visibility in the provision of urban environmental services (Campbell & Salus, 2003; Foo, 2018; Elton et al., 2022).

Local government officials are welcoming NGOs into service delivery and decision-making to circumvent bureaucratic hurdles in historical municipal forest delivery (Muñoz Sanz et al., 2022). The addition of NGOs is said to drive transparency and democracy in otherwise closed decision-making forums (Petersson, 2022). When involved in these collaborations, the range of NGO activities can vary and include financing, public program delivery, maintenance, advocacy, and public education (Svendsen & Campbell, 2008; Duinker et al., 2015, Cheng & Li, 2022). While some NGOs have unique offerings, others have more supplemental roles to existing government services, such as directing communities to governments' technical and financial supports (Gupta & Koontz, 2019). The mounting pressure from the public, advocates, and scholars for NGO involvement in these domains arises from the underlying belief that these groups can effectively complement governance mechanisms, enhance communities' agency, and lead to better policy outcomes (Wright & Andersson, 2013; Calò et al., 2023).

In contrast to these beliefs, governments engaging with non-civic actors may in fact see varied impacts from the inconsequential to the substantial (Evans & Wellstead, 2014). Some authors have questioned the effectiveness of such public participation, citing scant empirical testing in this domain (Fors et al., 2015) or hypothesizing that participating non-civic groups may detract from specific urban forest efforts, such as hindering green equity efforts by supporting an uneven canopy distribution across cities (e.g., Conway et al., 2011). Meanwhile, environmental NGOs are presented with their own challenges, such as balancing their independence from government while maintaining working relationships that influence governmental decision-making (Cadman et al., 2020). The practice of maintaining a positive tone when discussing public-civic collaborations biases the literature towards reporting the successful collaborative activities, rather than the diverse, nuanced, and challenging experiences of stakeholders (Gazley

& Guo, 2020). As a result, this may overlook the costs and risks associated with participating and hinder people's ability to mitigate them. To address these challenges, recent literature has contributed methods of evaluation in urban forest governance (see Wirtz et al., 2021; Secco et al., 2014).

Developing clear and objective performance measures is understood to be important in reviewing collaborative performance (Ordóñez et al., 2019). However, in execution, there are plenty of challenges associated with the methods of evaluation. Firstly, it is difficult to attribute specific governance modes to the successes or failures of program outputs. Jones & Kirk (2018) explain that the correlation between environmental conditions and actions in complex social-ecological systems is not always clear and there is a "time-lag" between actions and their resulting environmental condition. Secondly, when multiple sectors are involved in the delivery of public services, the roles and contributions of specific actors become blurred and unclear (Fisher, 2014) such that characterizing them could prove challenging. Lastly, researchers attempting to summarise or evaluate forest governance in this domain have found these arrangements to be shifting, long-term, and broad-scaled in nature (Lawrence et al., 2013; Hope et al., 2017). Rather than relying on evaluation tools to interpret governance arrangements, we can call on the experiences of involved parties and their attitudes towards the successes and failures in their collaboration.

Drawing on the attitudes and perceptions of urban forest professionals across sectors, this paper intends to elucidate the experiences of NGOs and government officials when collaborating on their local urban-forest efforts. Specifically, the objectives of this paper are as follows: 1) to determine the challenges, risks, and contributors to success in public-civic collaboration, 2) to discover the value added and associated trade-offs with NGO participation, and 3) to determine

who benefits from collaborations and in what ways. Articulating the successes, challenges, benefits, and downsides experienced by these groups can inform how and when public servants, NGOs, and other interested parties might approach collaborative activities.

3.2. Methods

3.2.1 Approach

The use of qualitative methods and data in urban forestry research is burgeoning, helping enrich our understanding of the social benefits, perceptions, management, and policies of urban forests (McLean et al., 2007; Krajter Ostoić & Konijnendijk van den Bosch, 2015). Building on the growing body of literature, this research seeks to elucidate the experiences of urban forest professionals participating in NGO-government collaborations by employing semi-structured interviews and qualitative data analysis. This a national study, representing nine unique cities across Canada. Critics of current nonprofit collaboration literature have identified a reliance on small, convenient samples that limit the generalizability and applicability of research (Gazley & Guo, 2020). In response, this study draws on a diverse sample of urban forest NGOs and relationships across a wide geographic distribution.

3.2.2 Recruitment

Several recruitment strategies were used to capture a range of participants. The first step in the recruitment process was to record the current urban forest NGO presence in Canada. To accomplish the initial scoping of NGOs, a general websearch for urban forest NGOs in Canada was performed and appeals for group names were sent out via professional networks, including social media (e.g., LinkedIn), the Canadian Urban Forest Network listserv (CANUFNET), and personal correspondence with professionals in the field. The initial scoping resulted in an inventory of 61 NGOs across Canada. To determine eligibility for the study, NGOs had to meet

the following inclusion criteria: 1) has a primary focus on urban forestry, 2) is registered as a nonprofit or charitable organization, and 3) interacts in some capacity with an urban forestry, parks, or similar public works department of municipal government within their respective area.

Upon excluding NGOs that did not meet the inclusion criteria, further desktop review was performed to inform the final selection process. We drew on NGO websites and publicly available policy and management documents. Purposeful sampling, a technique applied in sampling that involves identifying and selecting "information-rich" cases and knowledgeable individuals or groups (Palinkas et al., 2015), was used to determine the final selection. That selection captured considerable variation in urban forest NGOs operating in Canada, including elements such as size, budget, length of service, mandates and strategic priorities, and services offered. Additionally, Beckley et al. (2006) offered a continuum of public participation in forest management that includes four conceptual categories: a) information exchange, b) consultation, c) collaboration, d) co-management/control. The selection process sought to identify collaborations along the continuum with a range of NGO proximity to government.

The profiled collaborations represent 13 unique NGOs in nine cities across six provinces. While representation of all Canadian provinces was desired, the relatively high number of urban forest NGOs present in some regions (e.g., Ontario) compared to others (e.g., Atlantic Canada) was reflected in case selection. All but one case were active collaborations; three participants spoke to an NGO that no longer exists. The intention behind including a now defunct NGO was to mitigate any sampling error where only successful collaborations and positive outcomes are represented in our study sample (Gazley & Guo, 2020).

3.2.3 Participants

The study population consisted of urban forest professionals belonging to three groups: 1) urban forest NGO leaders, 2) local government officials, and 3) experts who have observed NGOs and their respective government departments interact. Divulging details about cross-sector collaboration is sensitive and participants may not readily disclose instances of failures or internal tensions (Hu et al., 2016; Harper et al., 2018). Expert observers offered an additional third-party perspective to mitigate any bias and offer a more fulsome account of collaborative activities. Expert observers consisted of academics (e.g., professors, PhD candidates), an independent consultant, small business owners, and a City Councillor.

Participants within NGOs were selected based on their contributions to decision-making within their organization and their knowledge of the networks connecting NGOs to municipalities. After identifying the NGO participants, snowball sampling (Noy, 2008) was used to identify their respective collaborators within government. NGO and government participants identified expert observers when present.

In total, there were 32 participants. The provincial distribution of participants was Ontario (n=13), Quebec (n=6), Saskatchewan (n=4), Manitoba (n=4), British Columbia (n=3), and Alberta (n=2). To our knowledge, the distribution of participants is representative of the distribution of active urban forest NGOs across Canada. The distribution of participants is represented by provincial geography rather than municipal to protect the anonymity of participants who may be identifiable within their municipalities by their role. The distribution of roles of participants were NGO leaders (n=15), government officials (n=9), and expert observers (n=8).

Table 2: Distribution of participants by role and province

Province	Role	Number of participants
Ontario	NGO leader	4
	Government official	3
	Expert observer	6
Quebec	NGO leader	3
	Government official	2
	Expert observer	1
Saskatchewan	NGO leader	3
	Government official	1
Manitoba	NGO leader	2
	Government official	1
	Expert observer	1
British Columbia	NGO leader	2
	Government official	1
Alberta	NGO leader	1
	Government official	1

3.2.4 Data Collection

Each participant took part in one semi-structured interview of 1-1.5 hours in length over the period of April 2022 to December 2022. The interviews generally consisted of one participant, except for two interviews that involved two participants from the same organizations. The lead researcher obtained informed consent from all participants with each voluntarily confirming their willingness to participate in the study after being informed of all aspects of the research study (Manti & Licari, 2018). Participants were offered the option to interview in French or English to alleviate any language barriers to participation. One interview was conducted in French with the assistance of a translator, and the remainder in English. The interview questions pertained to four broad categories: 1) local NGO presence, 2) the structure of public-civic collaborations, 3) public-civic collaborations in practice, and 4) opportunities, limitations, and barriers to collaboration.

Interviews took place over video conferencing software Microsoft Teams® and Zoom®, or a phone call dependent on the participant's preference. Video communication software has

become a common alternative to in-person interviews because of the convenience, accessibility, and ability to alleviate travel requirements (Gray et al., 2020). Offering multiple mediums alleviated technological barriers to participation. The interviews were recorded and transcribed verbatim using online transcription software. Interviews ended upon reaching data saturation (Hennink & Kaiser, 2022).

3.2.5 Data Analysis

Interview transcriptions were reviewed alongside the video recording for discrepancies before being put into NVivo 12. NVivo 12 is a computer-assisted qualitative data analysis software program used to facilitate the coding and retrieval of data and forming connections across these data (Coffey et al., 1996; Kalpokas & Radivojevic, 2022). To protect participants' anonymity, each participant was assigned a numbered code at random. A thematic analysis approach was employed to identify, analyze, and report patterns and support an in-depth understanding of the data and their themes (Braun & Clarke, 2006; Humble & Mozelius, 2022). We drew on a hybrid approach of deductive and inductive coding (Fereday & Muir-Cochrane, 2016). Codes were developed *a priori* based on the research objectives and relevant theoretical concepts in natural resource governance literature. When new themes arose, inductive codes were developed. Coded responses were studied for commonalities and divergences along different variables, including elements such as geographic distribution, proximity to government, size of NGO, and amount of funding. The following results section is organized along the parent coding themes.

3.3. Results

3.3.1. Successes

Participants associated positive outcomes with collaborations between urban forest NGOs and government agencies. An observer participant (#8) summarized: *"NGOs are helpful in the delivery of community goals … I just think that partnerships are absolutely crucial for success in urban forestry management."* However, participants also often expressed a sentiment that collaborative processes could be improved, e.g., *"the support given by city could be more, but overall, it's still positive"* (GOV-6) and *"It takes work, but it is successful. Could it be better? Probably."* (NGO-10).

3.3.2. Factors promoting success

A recurring factor that promoted the perceived success of collaborations was the presence of an urban forest champion. Regardless of the city or population size, participants remarked having a city champion, either at the staff level or within city council, contributed to the success of their collaboration. Similarly, government participants expressed that having an NGO actor embedded into their city operations, in which government staff have a close contact point, pushed overall efforts forward. Champions within NGOs are considered especially crucial at the inception of collaborations, as explained by an NGO participant (#3):
"[the NGO] was created basically because one person had the wherewithal, the time, the energy and the right knowledge at the right time to come up with the idea and follow it through for a couple of years, enough time so that the city could see the value in it and develop its own champions within the city too to help push it forward."

In specific instances, a tight-knit urban forest community was seen to be producing a pipeline of former NGO employees turned public servants that promote collaborations from within government. An NGO participant (#1) explained these circumstances: *"there's [an NGO] to urban forestry branch pipeline… which I think establishes a thread of understanding of what*

kind of situation we are in. They do have a bit of empathy … it's not anonymous… there is a precedent."

Additionally, collaborations were said to be more successful when groups had a better understanding of the actors involved including knowing *"what [actors] can and cannot do within the parameters that we have to operate"* (GOV-3) and *"how to work with each one of them or liaise"* (NGO-9). A knowledge of municipal government and city council, and how to navigate them, was noted to be of particular significance. Participants shared the importance of: *" knowing where you can go, how Council operates, how municipal government operates."*(NGO-4) and *"[knowing] how to navigate the political comings and goings of the day"* (NGO-13); and mentioned *"it would help if NGOs could be better educated in how to get along with the city. I think that would be really helpful and it requires a certain type of diplomatic coaching and diplomacy"* (OBS-4). Municipal or political knowledge was considered equal to, or more important than, technical urban forestry knowledge in realizing collaboration goals. As an observer participant (#3) stated: *"we didn't need a forester, we needed a political person"*. Other specific features of collaborations that contributed to their strength was having aligned goals and priorities, credibility, mutual benefit, respectful exchange, and stable funding.

Participants also acknowledged the backdrop and culture in which NGO-government collaborations are unfolding as a driver of success. Increasingly, external contexts, such as a societal focus on climate action and a culture of collaborative decision-making, are informing if and how cross-sector collaborations take place. Contexts include the political climate – *"what the shift in political climate does is that [there is] incredible growth in the space that we can take up and the projects that we can realize have quintupled…there's so much money now… federally, planting two billion trees"* (NGO-11) and community pressure and support – *"one of*

the things that has helped is that citizens are more supportive of trees and the importance of them. We're starting to get a lot more support for making sure that there are trees, there are trees in parks, there's places of big trees" (NGO-12). These external pressures have led to an awareness among public decision-makers to address climate action efforts. Additionally, government participants also cited a culture within their local community or wider urban forest community of collaborating with NGOs and engaging with the public.

3.3.3. Indicators of success

Participants offered indicators or metrics to assess the success of collaborations. Indicators of success related to two key categories: 1) the outputs of collaborations, and 2) the characteristics of collaborations.

The positive outputs of collaborations can be tangible measures of success. Participants emphasized the importance of developing quantitative deliverables and goals at the onset of collaborations and measuring them against the outputs. Using the outputs of collaborations can offer biophysical indicators including the number of trees planted under the collaboration, difference in canopy cover or natural areas, or tree survivorship. Alternatively, it can be useful to draw on social indicators like tree equity (e.g., the number of trees planted in underserved communities), community awareness and satisfaction, or the professional development or growth of those parties involved. However, according to participants, measuring their contributions within these categories is challenging. A government participant (#2) summarized these shortcomings; *"[to measure] the state of the urban forest that isn't [an] interesting one because there's so many influences in that… how do you tease out the impact of this one thing when there's this whole universe of inputs and factors?"* and *"[public] education is [a] really hard thing to evaluate because it's not necessarily very cause-effect… It's such a cumulative thing and*

you can't even necessarily put your finger on where all the inputs that they're getting information [come] from."

The characteristics of collaborations can be used to evaluate their success. Certain proposed traits are easily documented, such as funding agreements (e.g., the amount, multiyear funding), longevity of collaboration, and feedback. An NGO participant (#13) shared: *"money speaks louder than words; if they are funding you, their willingness to renew funding is a good indication that they are happy with your work."* Inversely, other characteristics are more abstract including the groups' willingness to participate, sense of agency among collaborators, and the attitudes of individuals involved. A government participant (#2) suggested asking, *"does this partnership give partners a greater sense of agency or a conduit for furthering their mission?".*

3.3.4 Challenges

Participants were queried about challenges associated with NGO-municipal government collaborations. Overwhelmingly, participants across municipalities of diverse sizes mentioned challenges related to the structure of government systems and operations including bureaucratic hurdles and departmental silos. These challenges were most notable when NGOs received marginal or no funding. In the absence of funding, the participants mentioned challenges such as closed government systems, slow pace, lack of transparency, and inaccessible politicians. It is unclear whether this is a product of non-funded NGOs requiring more capacity and time from governments in the absence of resources or if governments offer less attention and support to smaller, grassroots NGOs. Inversely, in more conventional funder-recipient relationships, participants readily shared funding challenges.

NGO and observer participants experienced a culture of caution and risk aversion in government or difficulties with local governments forfeiting control to NGOs. This sentiment

was reaffirmed by a government participant (#7) who stated, *"the landscape is too important for us to abdicate it to people [who] don't really know what they are doing."* Further, NGOs mentioned the challenge of aligning with government budget cycles. In many cases, city budget cycles do not allow NGOs to plan ahead. As an observer (#1) explained, *"the nature of urban forestry or dealing with trees tends to be a long-haul type of business and getting yearly funding or six months funding doesn't lend itself very well to long-haul [forest] programs where you educate people over the next 10 years to do something"*.

Lastly, competing interests within cities was a recurring theme. NGOs have a focused mandate relative to the many competing priorities in governments. A government participant (#4) offered: *"it's sometimes tough for an NGO with a single focus to understand the complexities of any city. You're essentially running 30 or more businesses, we're on everything from parks to cemeteries, to water treatment … the list is almost endless."* Urban forestry efforts and partnerships appeared to be lower in priority relative to other services. One participant stated: *"in the order of how environmental and climate change related things happen, it's not surprising that real resources go to things that are water-related first."* (OBS-9).

Other challenges were not specific to civic systems, but rather were characteristic of both parties. Participants cited a limited capacity on both ends, at times identifying limited capacity within their organization or assigning a limited capacity to their collaboration. Misaligned goals, visions, or mandates were strongly expressed by participants as a challenge to collaboration with one participant sharing: *"often when partners part ways, it's often just due to differences around strategic visions of where they are and what they want to do"* (GOV-3).

Challenges around funding were mentioned regardless of size of city or the amount of government funding received by NGOs. Inadequate or dwindling funds both in NGO funding

and city budgets were commonly discussed. When NGOs were funded by government, this presented a suite of challenges including stringent funding applications, delays or uncertainty around funding, and funding constraints on how NGOs could allocate funds. An NGO participant (#5) shared: *"every funder just wants to pay for trees, nobody wants to pay for people, but you need people to do the work".* In municipalities with larger populations, competition among NGOs or with private enterprises was cited as a challenge. For NGOs, this may present itself either as a difficulty obtaining funds or as a government that funds multiple programs in direct conflict with one another. For government officials, this presents itself as having to award stagnant public funds to multiple groups. The result may increase tensions between the two groups.

3.3.5 Vulnerabilities

Most participants were able to identify vulnerabilities in the ongoing functioning of their collaboration, regardless of its success. Precarious funding was a notable vulnerability, particularly among NGOs working closely with government or maintaining entrenched programming, compared to those receiving one-off program-specific funding. Vulnerabilities surrounding funding included city budget cuts, lack of multi-year funding agreements and unpredictable funding, and delays in cash flow. An NGO participant (#13) mentioned, *"positions often are not permanent and when they are, they feel tenuous at best because what if the next year's grant doesn't come through?"*

Funding vulnerabilities appeared largely outside the control of NGOs. Moreover, shifting attitudes and politics in government, changing city councils, and government losing capacity or sight of value in the collaborative work were among other vulnerabilities heavily expressed by participants and out of the control of NGO collaborators. An NGO participant (#13) shared:

"*changing councils is always a really terrifying moment… changing councils, changing budgets, changing priorities."* Similarly, competing priorities for government creates a vulnerability for NGOs. A government participant (#3) expressed:

"if the City Council decided homelessness [and] housing is the big strategic issue at the city [and that] we need to address that issue [and] decided to reallocate funding and say, OK everybody cut out 10-20% of your budget, we're going to put it towards that, which is entirely within council's every right to do that…that's a vulnerability for the nonprofit who may be hiring new staff with the anticipation that funding will continue year over year over year."

Beyond changes in government, vulnerabilities concerning NGO longevity and capacity were felt abundantly and evenly among NGO and government participants. In many cases, government is reliant on NGOs to fulfil their mandate – particularly when NGOs are their primary conduit for access to citizenry and private property. There is a certain level of precariousness associated with smaller or grassroots NGOs as many have a volunteer membership or an older membership. In these cases, volunteer fatigue or fragility is a vulnerability to ongoing functioning of partnerships. Staff turnover in NGOs was discussed at great length, particularly with groups who operated on an ad hoc basis with their government. Participants shared that upon losing personnel involved in collaborations, it is difficult to replace those social threads and for partnerships to regain their bearings. An NGO participant (#1) expressed*: "if we lost [redacted] the president, it would take quite a while for the organization to get their bearings back and figure out how they relate to the city and who's in charge of what."* Similarly, an observer (#2) conveyed: *"turnover at NGO's can be challenging. So, making sure that successes are built upon [and] that there isn't sort of a starting from scratch over and over again."*

Lastly, many NGOs shared examples of a perceived suppression or censorship associated with their advocacy efforts – particularly when there is an exchange of funds involved. This presents a potential vulnerability to those groups not willing to forgo their advocacy agenda. A participant explained: *"you don't want to bite the hand that feeds you… maybe there is this feeling that if we became too acrimonious or too activist or something that maybe the city would carefully re-examine their relationship with us."* (NGO-3).

3.3.6 Value Added

Participants could readily identify value added when embarking on collaborative urban forest management. Some participants enthusiastically shared these sentiments, for example, *"what is a relatively very, very small percentage of your urban forest budget, there's such a benefit to collaborating with a nonprofit*" (NGO-5).

Across cities and participants' roles, overwhelmingly, participants cited the value given to the urban forest – either directly or indirectly. On-the-ground benefits to the urban forest included removal of invasive species, monitoring of insect pests and diseases, greater rates of survival, better species selection, ecological restoration, higher replacement rates, and protection of existing urban forest. Under certain collaborations, cities are seeing more trees planted, specifically through NGOs' ability to open access to private properties and better recognition of private lands. Private properties require a more concentrated and intensive way of planting, relative to street-tree or park plantings, that cannot be accomplished by a city with limited time and resources to plant at that granularity. Further, both NGO and governments acknowledged that collaborations have added value for novel or improved regulations, bylaws, monitoring programs, and management plans. These values are generally mentioned by collaborators in

which NGOs are not receiving funding from government but rather have stronger advocacy programming and mandate to influence policy rather than carrying out field programming.

There was a heavy focus on the social value added and its indirect benefits to urban forests. There are opportunities for public education, awareness, and arming the public with information about forestry – however, to what extent remains unclear. Social benefits were seen by participants to influence the urban forest indirectly as it is more cost-effective to have an educated public, with participants sharing that educating the public on urban forest stewardship is managing more preventatively and less correctively. Further, NGOs offer superior models of public consultation and engagement and a more diversified messaging. An observer (#4) shared: *"NGOs provide a non-threatening way of public consultation … I think maybe NGOs have a better capacity to provide consultation that is not agenda-based … the impression a lot of people have in different kinds of public consultation is the city often will bring in their own experts … the conversation is really guided and manipulated."*

OBS-4 similarly stated that NGOs offer a *"more accurate barometer of public sentiments".* This strengthens governments' offerings and ability to realize their urban forest mandates. An NGO participant (#13) explained: *"I think municipalities feel they cannot do [public engagement] well themselves by virtue of being government. They think they cannot work well with volunteers because they're perceived as government. Why would I volunteer for my government?"*

Moreover, government officials and NGOs observed a financial incentive to participating in collaborations. NGOs were associated with mobilizing and creating access to resources. Further, NGOs are eligible for more funding avenues than local governments and in many instances, NGOs are required to match government funds. NGOs thus are making government

funds go much further, generating a greater value for taxpayers. A government participant (#6) suggested that *"financially it is a thousand times more profitable to work with organizations than to work internally with our resources."* Beyond the financial incentive, participants also noted a streamlined or more efficient urban forest management process when NGOs are collaborating, which contradicts some participants' claims that the addition of more actors can slow the process. However, cities are constrained in their urban forest delivery by their city council, and the addition of NGOs offers a more-nimble service delivery.

While there was a focus on the value added to urban forests, collaborations have contributed non-urban forest values to communities. Firstly, these relationships are said to offer career opportunities and professional development, particularly towards youth and students. Many noted that the "urban forestry pipeline" has seen many young professionals go through NGO programs to work in the public service. An NGO participant (#3) explained: *"it has informed young people and what they are doing later in life. The personal effect on people who go through the program, they continue to be active in the field. It is positive in terms of personal growth, education, skills…"* Further, participants remarked that collaborations cultivate a tighter community, create community leaders, and are associated with greater democracy in cities.

3.3.7 Downsides

There was more of a bias towards the value added by collaborations than the associated downsides, with fewer participants explicitly identifying drawbacks to collaborating. A notable downside was a perceived decrease in capacity or sentiment of trade-offs between offering time and resources and the return on investments. For government officials, the collaboration could absorb more resources than the value it offers. A government participant (#7) spoke to *"occasions where we make connections with small groups that are trying to get something*

started that flounder and absorb more resources, without achieving much." For NGOs, the excessive time spent justifying their asks or obliging to stringent reporting requirements may detract from capacity to deliver on other goals and deliverables. For both, this suggests that one downside can be a real or perceived waste of time.

Further, it is important to acknowledge the social-equity dynamics reflected in nonprofit work. According to participants, lower income communities are generally not creating NGOs. As such, these groups have specific constituencies or a *"constituency of a handful of people who founded the organization"* (GOV-3), representing a small subset of the city' population and at times having a disproportionate voice. One participant shared: *"those nonprofits will have a very, very loud voice and the voice of those people who are struggling to get by may not get heard at all."* (GOV-3). The disproportionate voice bears the risk of certain groups coopting agendas and shaping urban forests to their constituency's advantage. In instances where these groups are operating out of communities that have a relatively high canopy cover percentage compared to other neighbourhoods in the city, canopy cover inequities may be perpetuated. One participant expressed: *"if [NGOs] are working in public spaces like the adopt-a-park models and all that, [you] get into a whole ownership issue of who's allowed to do what and who has control over what and that's problematic"* (OBS-4).

3.3.8 Benefits and beneficiaries

Participants were queried about benefits and beneficiaries in collaborations to understand the delivery of benefits. Responses on beneficiaries ranged from NGOs, government officials, the public, and the urban forest. Government officials most frequently answered that the public, the urban forest, or their local government benefit the most from collaborations. NGOs responded that the public and governments benefit, with only one NGO participant expressing

that their group is the primary beneficiary. Expert observers' responses were less uniform. Some stated that both NGO and local governments benefit, others that NGOs do not benefit, and some shared that NGOs are the beneficiaries *"because they wouldn't exist without the city"* (OBS-6). The NGOs that were perceived as beneficiaries operated in closer proximity to government and received substantial funding relative to other groups. Widely, groups that were not funded or marginally funded were not perceived as beneficiaries.

NGOs are understood to be benefiting financially from collaborating with government. Additionally, participants referenced the intangible benefits that NGOs received from collaboration with government such as greater visibility, legitimacy and credibility, and leverage to realize their mandates. A government participant (#2) explained *"[NGOs] feel they have power to do things because of this collaboration."*

Governments benefit through good optics, as NGOs by nature are perceived as an inherently good addition to public service. One participant explained: *"if there's a nonprofit charity involved, it must be a good thing rather than just the city trying to do a marketing scheme to get people to plant trees"* and *"it's easier to trust a government that is not totally insular"* (NGO-1). Governments are also perceived to be benefiting through a greater public reach, diversification of their messaging, and being better connected to public sentiments. NGOs improve governments' access to individuals and individual thoughts and concerns. Lastly, interviewees made infrequent passing references to NGOs being a cheaper alternative to in-house or private labour. A government participant (#3) explained:

"I wouldn't be surprised that if some municipalities saw nonprofits as a cheaper alternative to doing things in house. Or hiring a contractor to do things. I think that's certainly an element of it. Nonprofits often have lower, lower staffing costs, provide more services at a lower cost."

3.4. Discussion

Our study demonstrates that the addition of NGOs in urban forest management is associated with positive outcomes. Participants concluded that collaborations between NGOs and government operated successfully and routinely added value to urban forest efforts and their community at large. Our study also examines the many barriers to collaborative activities between these two groups in order to provide a full perspective. Approaching urban forest collaborations as inherently valuable while overlooking their shortcomings renders uninformed any decisions to embark on collaborative activities. Gazley & Guo (2020) stated "that collaborations often fail, and that valuable lessons can be learned by carefully documenting the endogenous and exogenous factors that lead to collaborative failure" (p. 229). Despite their positive outcomes, current collaborative structures have vulnerabilities that we believe should be addressed to ensure continued success.

NGO participants were generally aligned on their perception of success and vulnerabilities. Many participants attributed their successful collaboration to an urban forest champion. While taking on different terms (e.g., "frontrunners"), the role of internal champions and support from city councillors is acknowledged as a driver of success in urban forest management because of these individuals' social competencies and leadership (van der Jagt & Lawrence, 2019; Vogt & Abood, 2021; Bush et al., 2023). Despite their irrefutable significance in interviews, individuals championing urban forest collaborations also present risks to collaborations ongoing functioning. Many collaborations are reliant on specific personalities in NGOs embedded in civic operations or city councillors promoting collective urban forest efforts – but their presence in collaborations can be precarious. Shifting politics, changing city councils, and NGO turnover were all cited as potential vulnerabilities. Considering the emphasis placed on

urban forest champions, these risks could impact their presence or persistence and ultimately the functioning of collaborations.

The impact of turnover and loss of personnel in collaborative management has been documented in environmental scholarship (Vogt & Abood, 2021; Hardie-Boys, 2010). Collaborations must be deliberately built with sufficient strength to withstand fluctuations and turnover with personnel (Campbell & Salus, 2003). While champions are undoubtedly important, collaborations should consider building capacity across a greater number of individuals and political relationships to mitigate turnover or shifting elected officials. As city councillors come and go over political terms, it is important for NGOs to maintain relationships with city staff whose positions are less tenuous.

Another significant driver of success for NGOs was a knowledge of municipal affairs. The ability to navigate municipal government and understand all corners of the political system is especially useful in the face of the challenges NGOs associated with participating in civic processes including bureaucratic hurdles, departmental silos, inaccessible politicians, and closed government systems. Coordinating cross-sector collaborations towards urban forest efforts is understood to be a complicated and challenging endeavour (Pincetl, 2010). The knowledge of municipal governance, diplomacy, liaising, and how to identify and approach key personnel in government could advance NGO efforts and facilitate coordination. To address or understand civic barriers, NGOs should promote building a diverse technical and political knowledge.

An additional challenge is that environmental NGOs are tasked with aligning short-term funding agreements, budget cycles, and contracts with the long-term planning required to make meaningful movement towards conservation objectives (Wahlén, 2014). This proves especially challenging in urban forest management, explained by one participant: *"it's a huge problem,*

especially with trees, you need to be thinking 80 years ahead." (NGO-1). NGO participants expressed the risks associated with unpredictable modes of management delivery that include precarious funding, lack of multi-year funding, or operating on one-off programs. It is documented in the context of urban forestry that long-term planning, including multi-year agreements and contracts, is important to realizing the benefits urban forests provide over time and can contribute to more successful governance arrangements. (Wirtz et al., 2021; Sousa-Silva et al., 2023). Long-term planning allows stakeholders to monitor and evaluate the success of their management programs and weather shifting politics (Sousa-Silve et al., 2023). NGO participants echoed this sentiment and expressed that stability in collaborations could better equip them with the tools to meet their mandates.

Inadequate funding is frequently referenced in the literature as the most significant institutional barrier to urban forest planning and implementation (Stevenson et al., 2008; Driscoll et al., 2015; Kronenberg, 2015; Davies et al., 2017) or the most effective way to successfully promote urban forest programming (Zhang & Zheng, 2012). Challenges with funding were frequently discussed by participants in our study and included limited funds, stringent funding applications, competition for funds, delays around funding, and financial decision constraints. While our results certainly do not contest that insufficient funding is an institutional barrier, when considering factors driving successes in collaborations, characteristics of relationships, individual personnel, and community support or pressure were most associated with leading to success, with funding being infrequently cited. This supports existing research that success in urban forest policy and program delivery does not depend only on resources but involves strong collective decision-making and the coordination of stakeholders (Ordóñez et al., 2020; Ordóñez Barona et al., 2023). Collaborations that did not abide by the traditional funder-recipient

relationships still identified successes in their operations. While resources are often cited as a limiting factor, it is important to acknowledge that in the absence of funding, collaborations can be promoted and succeed through other means and efforts. Funding is not an absolute necessity for achieving successful NGO-government relationships.

In the context of urban forest governance, Campbell (2014) emphasized the importance of following the delivery of benefits from different actors' collaborative efforts to understand which groups are being excluded from its profits. Stakeholder groups will have unique motivations for participating in collective urban forest efforts (Vogt & Abood, 2021) and successful partnerships will be mutually beneficial to all parties. According to Gazley & Brudney (2007), in government and nonprofit partnerships, governments tend to benefit from expertise or capacity, while NGOs benefit from increased funding. Our results corroborate that NGOs primarily benefit from funding. However, our study also suggests that in the absence of funding, NGOs are seldom acknowledged as beneficiaries. It is worthwhile noting that more significance may be placed on secure funding for larger groups – on account of income and increased operational overhead – than smaller organizations (Hardie-Boys, 2010). Therefore, taking a generic, universal approach to the delivery of benefits may not be suitable.

In addition to any financial or in-kind resources, NGOs should benefit through greater capacity to realize and deliver on their mandates. Few participants acknowledged the capacity of governments to give NGO leverage to push forward their agenda. Our results also echo de Guzeman et al. (2022) that the distribution of costs and benefits among stakeholder groups in urban forest programming is often determined by local governments. Considering the value NGOs are bringing to collaborative urban forest efforts, emphasis should be placed on ensuring an equitable distribution of benefits.

This research supports arguments that NGOs bring value to urban forest management (Campbell & Salus, 2003; Duinker et al., 2015; Elton et al., 2022). Participants spoke to the social and biophysical value added to the urban forest, a financial incentive, and community support and development. There was a tendency for participants to more readily share the value added over the downsides associated with collaborations; however, significant trade-offs did exist. In particular, some participants emphasized that because lower-income communities are generally not creating NGOs, there is a risk of certain non-representative groups using public funds to shape the urban forest to their advantage. It is understood that human agency plays a role in the distribution of urban ecosystems and their benefits (de Guzman et al., 2022) and community groups may be supporting an uneven distribution (Conway et al., 2011). NGOs are frequently involved in decisions regarding planting locations (Carmichael & McDonough, 2018) so this behaviour risks exacerbating already documented green inequities in cities (Watkins & Gerrish, 2018).

As the presence of urban forest NGOs in tree planting and management rapidly increases, more attention should be paid to where NGOs are operated and their role in urban forest equity efforts. If urban forest planning does not explicitly address equity concerns, NGOs may reproduce inequities in forest distribution (Grabowski et al., 2023). More attention should be directed to which communities NGOs are directing their current and future greening efforts through monitoring. However, there are significant costs and technical resources required to collect robust outcome data (Jones & Kirk, 2018) and many NGOs do not have the ability to allocate funding to monitoring programs, either due to insufficient funds or because of strict allocations of government or donor funding. Governments and NGOs alike should take steps towards including such monitoring into their collaboration's management practices.

Furthermore, urban forest decision-makers, in NGOs and governments alike, should include residents and community leaders outside of their immediate constituencies into urban forest decision-making (Carmichael & McDonough, 2018; Riedman et al., 2022).

3.5. Limitations

These reported results should be considered against the study's limitations. Firstly, the sample pool does not represent an equal number of participants in government, NGO, and observer roles. Some case cities did not have an expert observer and as such lacked a third-party perspective of the collaborative process. Further, the presence of NGOs is not randomly assigned. Researchers have determined factors contributing to NGO presence, including areas of political responsiveness and in areas with a high presence of other NGOs (Cook et al., 2017; Varuzzo et al., 2017). As such, there is an unequal distribution of participants across Canada because of a presumed greater presence of NGOs in some areas (e.g., Southern Ontario) relative to others (e.g., Atlantic Canada). Additionally, details of unsuccessful collaborations are sensitive, and as such, research participants may not readily share examples of failures in partnerships (Harper et al., 2018) or choose to participate in studies of collaborative management, thus contributing to a sampling error (Gazley & Guo, 2020). This study sought to include a range of sample NGOs and NGO-government arrangements, as well as the perspectives of third-party observers, to mitigate these limitations. Lastly, this study is exploratory in nature, and the presented themes and governance components could be studied at much greater lengths under different scales and in different geographical locations. This study may serve as a launchpad for future inquiries into urban forest NGOs and government collaboration.

3.6. Conclusion

Despite their significance in delivering forest services in cities, much is still unknown about the roles of NGOs in urban forest management, especially in the context of their relationships with local governments. Many government-NGO collaborations do not have articulated ground rules, roles, or agreements that outline clear relationships between elected officials, government staff, and NGO staff. While there is not a single governance arrangement that will yield the most success and optimal outcomes (Buijs et al., 2016), our results demonstrate that mutual challenges, risks, and drivers of success in NGO-municipal government relationships are shared among collaborations across Canada. That being said, the insular nature of specific collaborations and a low capacity among NGOs to share the outputs of their collaborative activities means that urban forest professionals do not have the means to benchmark the successes or challenges of their collaborations against others and determine the most efficient means of collaborating.

This paper determines factors that are driving the success in urban forest NGO-municipal government collaborations and determines the contributions these collaborations are making to overall urban forest efforts. The results demonstrate that there is space in municipal forest management for NGOs with different functional capacities to contribute value to cities. Further, the study draws on the experiences of involved parties to determine the challenges, vulnerabilities, and downsides associated with collaborating while proposing methods to mitigate the risks and streamline collaborative urban forest activities.

Many studies on urban forest management will frequently provide recommendations that include increasing available grant funding and budget allocations or diversifying income sources (van der Jagt & Lawrence, 2019). However, in the face of stagnant municipal funds (Davies et al., 2018), urban forest professionals can still mitigate the challenges and risks in their co-

management processes by arming NGOs and governments with the tools to navigate decision-making and adequate knowledge of the actors involved. This includes entering collaborations with thorough knowledge of civic processes, diversifying political relationships, fostering "champions" among a greater number of involved parties, and participating in longer-term contracts and funding agreements. Governments can and should play a role beyond just funding and their support should not be solely financial. Further, more attention must be paid towards the equitable distribution of the benefits and outputs of collaborative activities. Researchers and practitioners alike should continue to examine the contribution of different actors in collaborative processes and the combination and pattern of actors that yield desired outcomes and streamline urban forest proceedings.

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Chapter 4: Conclusion

4.1 Findings

There is growing scholarly interest in the topic of forest governance and the involvement of private or public actors in this domain (Giessen & Buttoud, 2014). However, research into urban forest NGOs and their contributions in forest management remains nascent. In a Canadian context, the scholarly literature is lacking formal, systematic investigations into urban forest NGOs (Elton et al., 2022). In response, this thesis offers exploratory research into NGO involvement in urban forest programming across Canada. In doing so, it accomplishes two overarching objectives: 1) to determine the structure of collaboration between urban forest NGOs and local governments and 2) to elucidate practitioners' perspectives towards urban forest NGO and local government collaborations.

When examining the first objective, it was determined that NGOs and governments engage both formally and informally; however, the strength and formality of relational ties was a product of NGO size and budgets. Additionally, while much of the research on government-nonprofit relationships has focused on customary funder-recipient arrangements, I discovered that urban forest NGOs maintain relationships with government outside these traditional partnerships. In response to the second objective, participants consistently shared that the structure of government systems and operations was a challenge associated with NGO-municipal government collaborations. Inversely, individual personnel and community support contributed to successful outcomes.

The results of this study contribute to ongoing scholarly debates on whether NGO involvement in natural resource management provides discernable benefits in the outcomes of environmental programs. While many scholars argue that NGOs bring value to urban forest

management (Campbell & Salus, 2003; Elton et al., 2022), others have questioned the effectiveness of such public participation, citing scant empirical testing in this domain (Fors et al., 2015) or remarking that NGOs may detract from practitioners' urban forest priorities (Conway et al., 2011). My results suggest that in the context of urban forest management, NGOs do make valuable contributions to local efforts when collaborating with municipal governments. This hypothesis is supported in Canadian municipalities, where the civic sector is increasingly recognizing NGOs' contributions towards achieving political agendas and welcoming community groups to participate in service delivery and decision-making processes.

It is worthwhile noting that despite an overall positive tone among study participants, responses also illuminated the challenges, barriers, and downsides associated with collaborative management. One such challenge faced by NGOs is that many governments do not readily abdicate power and ownership over land and resources. Further, in the absence of articulated roles or agreements, NGOs are often required to follow governments' rules for public engagement, rather than participating in meaningful, collaborative partnerships. The result of an imbalance of power in NGO-government collaborations is that the distribution of the benefits of such a relationship is often determined by the local governments.

4.2 Recommendations for future research

This study raises many important questions worth pursuing. While I focused primarily on the processes of collaborative activities, future research could explore how governance processes with varying levels of NGO participation would influence the outcomes of urban forestry programs. Additionally, the indicators and metrics to assess the success of collaborations, explored in Chapter 3, could be studied at much greater length by future researchers. Recent scholarship has acknowledged the need for evaluative and comparative tools in urban forest

governance (Ordóñez et al, 2019); empirical methods to evaluate processes and outcomes of NGO-government collaborations could arm public servants and NGOs alike with information to justify their budgetary requests to city council and senior levels of government.

Lastly, this research may provide groups navigating cross-sector interactions with insights to streamline their collaborative activities. The study's sample represents a wide spectrum of collaborative exchanges, varying in formality, mandates, roles, contributions, and outcomes. While no one arrangement will yield the most efficient outcomes, researchers should continue to identify different configurations and methods of engagement that can withstand political and financial turbulence. Research like this will prove especially relevant as biophysical and sociopolitical contexts evolve under climate change, biodiversity crises, and continued rapid urbanization that forces urban forest managers to adjust their public engagement accordingly.

4.3 Practical applications

While the primary objectives of this research were to characterize the structure of collaborations and perspectives of involved parties, the results also illustrated the potential associated with including community groups in municipal forest management. Despite collaborations' trade-offs, public servants should not be hesitant to engage local NGOs. There is space in municipal forest management for NGOs of different sizes and functional capacities to contribute value and more efficient outcomes. Considering the value NGOs are bringing to municipal forest efforts, emphasis should be placed on developing meaningful and balanced partnerships where all participants are engaged. It would be useful for organizations to approach collaborations with a common understanding of the roles they will play and how decision-making may unfold. Additionally, collaborators should ensure mutual benefit to all participants

by communicating their expectations and leveraging their capacity and resources to realize their respective mandates.

Furthermore, there is an insular and siloed nature to NGO-government collaborations and a low capacity among urban forest NGOs and local governments to share their collaborative processes and the associated outcomes. This research demonstrates that the significant challenges and barriers are shared among participating groups and are not bound to specific geographies, funding structures, or partnership configurations. However, NGOs and governments alike do not have the tools to benchmark their experiences against other practitioners participating in similar public-civic interactions. As a result, collaborations are frequently operating in silos from one another with no means of knowing if they are engaging in the most productive way. We recommend that collaborators find platforms to mobilize their wealth of knowledge and compare their arrangements and conditions against one another. Bulkeley & Betsill (2005) argue that "strategies to implement urban sustainability usually rest on the development of exemplar projects or 'best practices', from which lessons can be learned, and applied, within the urban arena or transferred between cities" (p.47).

The burgeoning presence of urban forest NGOs in Canada is representative of traditional management systems that do not optimally serve the public or meet community goals. Much of the interest in NGOs stems from displeasure among the performance or accountability of the civic society. Considering the myriad of values and benefits that forests generate for urban dwellers and stand to lose in the face of environmental stressors, the roles of citizens, communities, and collective intelligence will only become more integral to sustainable urban forest management. Research like this provides an important contribution in that it legitimizes NGOs as dominant urban forest actors and contributors to greener, healthier cities.

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Appendix 1

Semi-structured interview guide for NGO and municipal government participants

Introductory questions:

1. To your knowledge, what motivated the conception of your organization? [for NGOs]
2. Can you describe the type of work your [organization/department] does?

Questions about structure and function of the NGO:

3. What are barriers to increasing your [organization's/department's] offerings?
4. Are there any other groups with which your [organization/department] works closely or collaborates with?

Questions about NGO's governance involvement:

5. Describe [your organization's/local NGOs'] involvement in municipal governance affairs?
6. [Does your organization/Do NGOs] ever challenge government decision-making?
7. Does your organization work closely with [local NGOs/municipal government] on any specific program, policies, or initiatives? Can you explain.

Questions about structure of public-civic collaborations:

8. Are there networks connecting [your organization with the local government/your department with local NGOs] in your area?
    a. Can you describe them?
    b. How did they form?
9. Do the involved parties share joint outcome goals with?
10. How do the involved parties hold each other accountable?
11. Are there systems/processes in place to monitor or evaluate the collaboration?

Questions about public-civic collaborations in operation:

12. In the past, working on programs, to what degree were both parties involved and at which stages (e.g., development, monitoring, etc.)?
13. When working on a common project, policy, or initiative, who brings what resources forward (such as physical, material, intellectual)?
14. Is decision-making power shared between the organizations?

Opportunities, limitations, and barriers to collaborations:

15. Can you think of how the collaboration has added value to your area's urban forest?
16. Can you think of anyways the collaboration cost or setback your area's urban forest?
17. What are some challenges associated with this collaboration?
18. Do you perceive this collaboration as successful?
19. If yes, can you think of enabling factors or processes that promote the ongoing success of this collaboration?
20. If yes, can you think of any measures to assess the success of collaboration?
21. Who profits from this relationship?
22. Has there been any downsides or loses associated with this collaboration?
23. What are the vulnerabilities to this collaboration ongoing success?
24. Is there anything else that I haven't asked about regarding urban-forest NGOs, or NGO-municipal government collaborations, that you would like to share, or think would be relevant to my research?

Appendix 2

Semi structured interview guide for observer participants

Questions about local NGOs and government:

1. Can you describe the urban forest NGO presence in your local area?
2. Have you observed municipal government and urban forest NGOs working closely together on any urban forest programs? Can you explain.
3. Do these groups ever challenge policy or programs put forward by the government?

Questions about structure of public-civic collaboration:

4. Are there networks connecting [NGO name] and the municipal government in your area?
    a. Can you describe them?
5. How do the parties hold each other accountable?
6. Are there systems/processes in place to monitor or evaluate the collaboration?

Questions about public-civic collaborations in operation:

7. In the past, working on programs, to what degree were both parties involved and at which stages (e.g., development, monitoring, etc.)?
8. When working on a common project, policy, or initiative, who brings what resources forward (such as physical, material, intellectual)?
9. Is decision-making power shared between the organizations?

Opportunities, limitations, and barriers to collaborations:

10. Can you think of how the collaboration has added value to your area's urban forest?
11. Can you think of anyways the collaboration cost or setback your area's urban forest?
12. What are some challenges associated with this collaboration?
13. Do you perceive this collaboration as successful?

14. If yes, can you think of enabling factors or processes that promote the ongoing success of this collaboration?
15. If yes, can you think of any measures to assess the success of collaboration?
16. Who profits from this relationship?
17. Has there been any downsides or loses associated with this collaboration?
18. What are the vulnerabilities to this collaboration ongoing success?
19. Is there anything else that I haven't asked about regarding urban-forest NGOs, or NGO-municipal government collaborations, that you would like to share, or think would be relevant to my research?