

Cross-Sector Partnerships for Implementing Community Climate Action Plans: Structural features, Partner Outcomes and Plan Outcomes

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1. Introduction

Local governments all over the world hold an important role in climate protection as approximately 70% of global greenhouse gas (GHG) emissions are from cities (UN-Habitat 2011). Municipalities can influence emissions through their numerous roles, for example, they typically have at least partial control over land use, transportation planning, municipal buildings, and hold a key role in waste management (Deangelo and Harvey 1998; Demuzere et al. 2014). By partnering with other organizations, more progress through climate action plans can be achieved at a community-wide scale (Clarke and Ordonez-Ponce 2017; Sun et al. 2020).

A community climate action plan is a document capturing a set of strategies that local organizations have committed to carrying out for reducing GHG emissions. In Canada, there are more than 280 local governments committed to addressing climate change through membership in a program called Partners for Climate Protection Program (PCP) (FCM and ICLEI Canada n.d.). At issue is how local governments may effectively implement community climate action plans through sound structural features, and therefore enable reaching desirable outcomes (Clarke 2011). This study seeks to explore cross-sector partnerships as a means of implementing community climate action plans, both in terms of the structural features of the partnership and the resulting plan and partner outcomes.

Environmental problems, such as climate change, that are too large for any single organization to approach alone (Bryson et al. 2006; Gray and Stites 2013; Waddock 1991), are being addressed through cross-sector social partnerships (CSSPs) (Crane and Seitanidi 2014; MacDonald et al. 2018; Selsky and Parker 2005; Waddock 1991). CSSPs undergo a collaborative strategic management process, which begins with the partnership formation, a collaborative strategic plan formulation, both partner and partner-level implementation, and ends with realized outcomes, with multiple feedback loops throughout the whole process (Clarke and Fuller 2010).

Clarke and Fuller (2010) describe six types of outcomes that can result from the collaborative strategic management process. Two of the six types of outcomes that can result from a collaborative strategic management process include plan- and partner-centric outcomes (Clarke and Fuller 2010). Plan-centric outcomes are outcomes that are related to the results around which the partnership was initially created, whereas partner-centric outcomes are outcomes related to the learning and adjustments in organizational behavior or structural features of the individual partners (Clarke and Fuller 2010; Ordonez-Ponce et al. 2020).

Currently, there is a knowledge gap in the literature and practice regarding the relationship between the structural features of the cross-sector partnerships and the two types of outcomes from implementing community climate action plans (World Climate Research Programme 2019). This research seeks to fill this knowledge gap and provide new insights as a means of theoretical as well as practical contributions. Practically, this knowledge is useful to sustainability managers, sustainability practitioners, and also local government staff, as they can be informed of how implementation structures can be designed to positively contribute to addressing climate change through mitigation, and also to further comprehend the relationship of structural features and outcomes (MacDonald et al. 2018; MacDonald et al. forthcoming). Understanding structural features will be valuable as many communities have decided to focus on tackling climate change issues as a sustainable development priority (MacDonald et al. 2019). Structural features during plan implementation also affect what outcomes can be achieved (Clarke 2011).

The questions addressed through this research are: (1) What lessons from previous studies regarding the relationship between implementation structures and outcomes of collaborative community sustainability plans are transferable to the context of community climate plans? (2) What are the relationships, if any, between the partnership structural features, and plan and partner outcomes? (3) What collaborative implementation structures are present during the implementation of municipal community climate action plans in Canada; and what are the plan and partner outcomes? An overall purpose of the study is to contribute to knowledge needed for Sustainable Development Goal 17, target 17.17 which aims to “encourage and promote effective public, public-private, and civil society partnerships, building on the experience and resourcing strategies of partnerships” (United Nations 2015).

2. Literature Review

2.1. Climate Change and Local Governments

Many countries, including Canada, have ratified the 2015 Paris Agreement, where 189 nations have come together to prevent the global temperature from rising beyond two degrees Celsius above pre-industrial levels (United Nations Climate Change 2020). Local governments have significant control and influence over GHG emissions, on the scale that can contribute to a nation's international reduction targets (Bulkeley and Betsill 2005), and many mitigation efforts are under municipal jurisdiction. Bulkeley and Betsill (2005) note that local governments have a certain influence over emissions from waste production and energy consumption through processes such as energy management, transportation, planning, and waste management (Bulkeley and Betsill 2005). Addressing climate change at the scale of the city is needed since cities produce waste and consume energy (Bulkeley and Betsill 2005; Deangelo and Harvey 1998).

2.2. ICLEI and PCP Program

The Partners for Climate Protection (PCP) is a partnership between the Federation of Canadian Municipalities (FCM) and ICLEI Canada—Local Governments for Sustainability, and is the Canadian component of the global Cities for Climate Protection (CCP) Campaign (FCM and ICLEI Canada n.d.). The PCP program is a five-milestone framework that guides members in (1) creating GHG emissions inventories, (2) setting reduction targets, (3) developing local action plans to reduce emissions, (4) implement policies and measures, and (5) monitor and verify results (FCM and ICLEI Canada n.d.). Steps are usually completed in order, from the first milestone to the last, but some municipalities may begin by formulating an action plan to begin reducing emissions immediately (ICLEI Canada and FCM 2008). The PCP program's milestone framework differentiates between corporate and community-wide GHG inventories and plans (ICLEI Canada and FCM n.d.). Community climate action plans make emissions reduction targets beyond emissions directly controlled by the local government, such as the business and civil society sectors (ICLEI Canada and FCM n.d.). Community-wide plans are bounded by emissions within the geographic region (Clarke and Ordonez-Ponce 2017).

Accordingly, a global survey of urban climate change experiments in 100 cities has shown that it is the local governments who have the main leading role (66% versus civil society, private sector, or other governments) in urban climate change efforts, but that other private and civil society actors also have key roles

(Castan Broto and Bulkeley 2013) as capable partners in implementing municipal climate responses (Aylett 2014). Local governments can facilitate actions by building relationships with stakeholders, boosting public participation and campaigning for this cause to national governments (Betsill and Bulkeley 2006).

2.3. Cross-Sector Social Partnerships

Cross-sector social partnerships (CSSPs) can be defined as entities created for addressing social, economic, and/or environmental issues by continually and actively engaging partners from two or more sectors (Crane and Seitanidi 2014; Selsky and Parker 2005; Waddock 1991). CSSPs require the partners' commitment of resources as well as their involvement in the planning, organizing, evaluating and implementation of activities defined as necessary for the success of the partnership (Waddock 1991). CSSPs are created when a large social problem needs to be addressed, including implementation of a collaborative strategic plan (Clarke and Fuller 2010), which community climate action plans can be categorized under as they are collaborative and cross-sector in nature.

CSSPs are growing in numbers; their foci are getting more complex, having great impact with important implications for learning, and studies from different academic disciplines are proliferating (Clarke and Crane 2018). While this condition seems expected due to its interdisciplinary characteristics (Bryson et al. 2015), it is also a main research challenge as they exist in a variety of sizes, purposes, time frames, voluntariness, and regional levels (Selsky and Parker 2005).

Waddock (1991) has identified three "ideal types" of CSSPs according to their level of problem salience and organizations' interdependence. Selsky and Parker (2005) have classified them as transactional, integrative, or developmental, based on their timeframe, level of openness, and interest orientation, offering different configurations of social partnerships. One of those configurations is composed of partners from across sectors focusing on regionally large scale projects that typically concentrate on social, economic, and/or environmental issues (Selsky and Parker 2005).

Huxham and Vangen (2000) suggest that current public sector management needs a formal understanding of the skills, processes, and structural features; tools required for working inter-organizationally. A partnership approach (collaborative approach) is a strategic management process that includes partners in plan formation, implementation, and decision making (Clarke and Erfan 2007; Clarke and Fuller 2010).

2.4. Collaborative Strategic Management Process

In the partnership approach to problem solving, collaboration entails collective decision making, and collective responsibility for actions between stakeholders (Selin and Chevez 1995; MacDonald et al. forthcoming). Instead of collaboration being a fixed, organized state, it can be seen as an ongoing process (Selin and Chevez 1995). Quite typically, collaboration processes begin with environmental antecedents, moving to problem setting, direction setting, structuring and implementation (Gray 1985), and finally, outcomes and feedback arrows illustrate the dynamic and circularity of collaboration (Selin and Chevez 1995).

With the widely applicable nature of collaboration processes, CSSPs have become evidently used in different sectors globally in at least the past two decades (Selsky and Parker 2005). However, cross-sector collaborations do not always succeed in solving all problems they set out to solve (Bryson et al. 2006; Gray and Stites 2013). There have been cases where what was meant as solutions create more problems (Bryson et al. 2006). Cross-sector collaboration is not a one-size-fits-all solution because of the complex, interconnected relationships, and changes along the progress can cause unexpected effects in the system (Bryson et al. 2006). The failure or success of a partnership depends on the types of partners and their relationships, the phases in the partnering process, the structural features of the partnership, as well as the respective environment (Glasbergen 2007). According to Waddock (1988), the potential for failure is great if the partners have not interacted before and may not understand what it means to partner or what the partnership is about. In fact, some of the reasons for partnerships to fail are the lack of commitment from the partners and gaining less than expected (Waddock 1988). On the contrary, partnerships are more likely to succeed if they focus on areas interdependent for the partners, so that they would all gain something which is larger than the costs of participating (Gray 1985; Waddock 1991), when there are leaders and sponsors, an agreement on the problem, networks exist at the moment of initial formation of the partnership, or when the partnership possesses resources and strategies for dealing with power imbalances among the partners (Bryson et al. 2006).

According to Clarke and Fuller (2010), a collaborative strategic management process consists of a context describing situational considerations for forming the partnership; a collaborative strategic plan formulation; a deliberate and emergent collaborative plan implementation by the partnership and by the partner organizations; the realized collaborative plan implementation outcomes including plan, process, partner, person, outside stakeholder, and environment-centric

outcomes; and changes in the social problem domain which may impact the collaborative plan implementation process and/or outcomes.

Relating to changes to domain, but worded slightly differently, Bryson et al. (2006) also credit that many collaboration academics noticeably identify that context affects structural features, such as when government policy changes affect available resources, rearranging structural ties of partners. At all stages of the collaboration, trust, commitment, collaboration, understanding, and outcomes, are all important (Ansell and Gash 2008), as are the roles each plays (Yan et al. 2018).

2.5. Key Structural Features for Implementation through a Cross-Sector Partnership

When collaborations require sustained partner commitment, structuring is needed as a way to manage stakeholders and stakeholder interactions systematically (Selin and Chevez 1995). Structuring is a configuration of enduring and persistent activities, whose main characteristic is the regularity of roles and procedures, and of processes of interactions (Ranson et al. 1980), a dynamic process due to the complexity and uncertain nature of collaboration, where complexity derives from factors such as changes in membership, and partners (Bryson et al. 2006; Selin and Chevez 1995). The process of structuring includes formalizing partnerships, role delegation, task detailing, control system creating and monitoring (Selin and Chevez 1995). A partnership's structural features are also in part dictated by the external context (Bryson et al. 2006; Clarke and Fuller 2010), such as when government policy changes take place, affecting available resources for problem solving and restructuring the structural ties of the partners in the collaboration (Bryson et al. 2006).

Implementation structural features, understood as features that help to facilitate the implementation process, have been known to affect partner engagement and resultant outcomes (Clarke 2014). Structures are composed of processes, form(s) and partners, and many variances of structural differences can take place during implementation (Clarke and Erfan 2007). Clarke (2011, 2012) explored the question of which structural features are important for enabling plan outcomes, finding that partner engagement, partnership and partner level implementation, presence of communication system, presence of monitoring system, and collaborative oversight were important for achieving plan outcomes—findings which are applicable to implementing plans with GHG emissions and air quality goals (Clarke 2011). The study concluded that structural features are interrelated (Clarke 2011). For example, if organizations are not engaged, it would not be possible to have them implemented within their organizations; if the final goal is to achieve

the plan outcomes of the community sustainability plan, it is not enough to have only one or two of these features (Clarke 2011). Table 1 shows the five structural features:

Table 1. Structural features typically included in successful implementation.

Structural Feature (Clarke 2012)	Description
Collaborative Oversight Body	The successful implementation of a community sustainability plan needs a multi-organizational party to oversee the implementation process while giving short-term directions for action, such as fund allocation and staffing assignments (Clarke 2012). This collaborative oversight body should have a secretariat to coordinate the process, a body to make decisions and oversee the implementation processes, and include members of the municipal council as well as other partner representatives (Clarke 2012).
Engagement of Key Partners	Not only do key organizations from various sectors need to be engaged, but also the right number of them, and/or there needs to be a method to perpetually add partners to the implementation process (Clarke 2012). One model of engagement is participation, where stakeholders are encouraged by the municipality to provide input to the sustainable community plan (Clarke and Erfan 2007). Another approach is the partnership model of stakeholder engagement, used for sustainable development, where stakeholders do more than provide input and actually collaborate on planning, decision making, and acting for common goals and visions (Clarke and Erfan 2007). The partnership model involves stakeholders significantly more than the participatory approach.
Community Wide Actions (Partner Actions)	With each partner implementing the collaborative strategic plan, sustainable development can happen outside of solely the governmental jurisdiction (Clarke 2012). During the implementation by individual organizations, tasks are more specific, and specific to the organization (Clarke and Fuller 2010).
Monitoring System	A monitoring system enables adjustments during the implementation stage, and for plan renewal as required (Clarke 2012). Having both progress and process reports works well (Clarke et al. 2019).
Communication System	Communication activities are useful to allow networking between partner organizations and to reach community members (Clarke 2012), with the ability of maintaining complex organizational forms, like CSSPs, and demonstrate value through collective agency (Koschmann et al. 2012).

2.6. Outcomes of Collaborative Strategy Management Process

Outcomes of collaboration may include benefits, impacts and programs (Selin and Chevez 1995). In the cyclical process of collaboration, outcomes are shown next to the implementation of the partners and partnership (Selin and Chevez 1995). From the six types of outcomes described by Clarke and Fuller (2010) that can result from the collaborative strategic management process, plan- and partner-centric outcomes considered in this study.

Plan-Centric Outcomes—Bryson et al. (2006) posit that the point of creating and maintaining CSSPs should be for making public value that cannot be achieved by individual organizations alone, and for creating positive social change. This ability to create greater public value and change comes from the partners' collective agency (Koschmann et al. 2012; Seitanidi et al. 2010). Plan outcomes are the background issues for why the collaboration had initially been formed and can be found in the strategic plan (Clarke and Fuller 2010). When assessing if the community is progressing in its plan outcome, the trend within each region itself is most important (Clarke 2011). For this study, plan outcomes relate to climate mitigation.

Partner-Centric Outcomes—Partner-centric outcomes are outcomes that partners experience from the collaboration (Clarke and MacDonald 2019). Much of the literature on inter-organizational learning from collaboration and the benefits that arise have been centered on business partnerships, with limited research on outcomes from private-public partnerships (Arya and Salk 2006). In CSSPs, benefits can be realized by individuals, organizations, various sectors, and by society (Selsky and Parker 2010). This article's research focuses on partner outcomes classified as physical capital: cost savings and increased capacity; human capital: knowledge or learning; and organizational capital: innovation, relationships, reputation, new markets and resources, and sustainability programs (Clarke and MacDonald 2019; Ordonez-Ponce et al. 2020).

In summary, while a fair amount is known about structural features of cross-sector social partnerships, and resulting outcomes, this article considers its application to the context of implementing community climate action plans, and also what might be learned from this context to further theoretical understanding in the cross-sector partnership literature and for Sustainable Development Goal (SDG) 17.

3. Methods and Materials

This study uses a qualitative multi-case research design (Yin 2011). Even though case studies have been traditionally used for process evaluations, it has now been proven through application to be suitable to analyze outcomes (Yin 2011), both of

which are examined by this research. The research partner engaged in data collection is ICLEI—Local Governments for Sustainability. As explained earlier, ICLEI Canada, in partnership with FCM, are the organizers of the Partners for Climate Protection (PCP) program, which is a hub for Canadian local governments that are committed to taking action to reduce GHGs (FCM and ICLEI Canada n.d.).

Selection of the case studies was based on the following criteria:

1. They are mid-sized Canadian communities involved in the PCP program (as small and mid-sized communities are under-studied in this context, and yet are the majority of communities in the PCP program. These criteria were applied by removing the top 10 Canadian cities, by population, from consideration);
2. They are members of the PCP program that have achieved milestone 5¹ in the community stream by July 2016 (as this ensures communities are monitoring progress);
3. There is a dedicated community-wide GHG action plan or energy plan, and not only part of a sustainable community plan or equivalent (as we are interested specifically in the implementation of climate action plans);
4. Their plans have considered a GHG emissions target that extends beyond 2016, and they have a current climate action plan or energy plan that is part of the PCP program, or a plan developed beyond the PCP program after achievement of Milestone 5 (as this ensures it is potentially ongoing).
5. The implementation of their plans includes 10 partners or more (as we are interested in studying cross-sector, multi-organizational partnerships);
6. They have been implementing the plan in the most recent year (as this ensures it is still active);
7. They were willing and able to provide relevant data in English for the study.

Sixteen communities met the first two criteria. These were assessed in more detail against all the criteria. The communities chosen for the multi cross-case study analysis are the District of Saanich (British Columbia), the City of Guelph (Ontario), the City of North Vancouver (British Columbia), and the City of London (Ontario) (Table 2).

¹ Milestone 5: Monitor progress and reporting results (<https://fcm.ca/en/programs/partners-climate-protection/milestone-framework>).

Table 2. Selected case studies.

City	Plan	Community GHG Target	Year Adopted
District of Saanich, British Columbia	<i>Saanich Climate Action Plan (CAP)</i>	33% reduction from 2007 by 2020	2010 (FCM 2015)
City of Guelph, Ontario	<i>Community Energy Initiative (CEI)</i>	Reduce energy use in buildings, industry, and transportation by 50% per capita and GHG emissions by 60% per capita by 2031, from 2006 levels (FCM 2016)	2007, entered implementation phase in 2010 (City Council Agenda n.d.)
City of North Vancouver, British Columbia	<i>Community Energy and Emissions Plan (CEEP)</i>	Reduce emissions by 15% below 2007 levels by 2020 and 50% by 2050 (City of North Vancouver n.d.b.)	2010
City of London, Ontario	<i>Community Energy Action Plan (2014–2018) (CEAP)</i>	Reduce GHG emissions by 15% from 1990 levels by 2020; reduce 80% in total GHG emissions from 1990 levels by 2050 (Corporation of the City of London 2014)	July 2014 (Corporation of the City of London 2014; Donnelly et al. 2016)

Data collection was undertaken in collaboration with ICLEI Canada between June and October 2016, and it involved two stages: data collection for in-depth cases, and data collection for partner organizations. For stage 1, for each of the four final communities the implementation structures and plan-centric outcomes were initially collected from archival sources (websites, plans and reports) and then informants were interviewed for further details. Semi-structured interviews were conducted via Skype or phone, lasted between 30 and 60 min, and were recorded and transcribed. Interview questions and how the interview was introduced can be found in Appendix A. The key informant was the municipal staff (PCP contact) responsible for implementing the community plan. This person was interviewed regarding plan information, implementation structural features, plan outcomes and partner outcomes.

Stage 2 was focused on the municipalities' partner organizations, following a procedure similar to that used in stage 1. All partner organizations were invited to participate interviewing them via telephone or Skype. Interviews lasted 15 min approximately and they were recorded and transcribed. Questions are included in Appendix B. Core implementation partners were interviewed regarding partner outcomes experienced from collaborative implementation. Core implementation

partners are organizations that are involved more in implementation and/or over the longer term.

For data analysis, interview transcripts and archival material were deductively coded for the five structural features (Clarke 2011; Clarke 2012), for the partner outcomes (Clarke and MacDonald 2019), and for the plan outcomes. Then, the transcripts and archival material were inductively coded for new content. Inductive coding allows for themes to emerge from the empirical evidence. Tables were created with the reduced information for each case and inserted into case write-ups. For the partner outcomes, frequency counts for each category were determined (one count per interviewee maximum). A cross-case comparison matrix was conducted using a process-outcomes matrix (Averill 2002) to see if any patterns emerged between a partnership’s structural features and the partner and plan outcomes. Cross-case conclusions were drawn. Implementation structural feature findings were compared to the literature on CSSPs and new learnings were determined. Partner outcome findings were compared to partner outcome findings from the CSSP literature to validate previous research and offer findings from the new context. Table 3 shows the number of interviews developed per type of organization.

Table 3. Interview counts and organization types.

Organization Type	Saanich	Guelph	North Vancouver	London
Government	3	1	2	1
Business	2 *	2 ^	1 *	1 ^
Business Association	0	0	0	1
Non-profit/Non-governmental organization	2	2	1	0
Total Interviews	7	5	4	3

^: Denotes one common partner of Guelph and London; *: Denotes one common partner counted between Saanich and North Vancouver.

Each of four cases is introduced in this section. The PCP programs allows a number of plan types to be considered as community climate action plans, as long as the plans have GHG reduction targets. Thus, some of the cases focus on community energy plans, while others focus on community climate action plans; regardless of their name, PCP would consider these all to be community climate action plans.

3.1. District of Saanich, British Columbia: Saanich Climate Action Plan (CAP)

Plan Purpose—Embedding climate action commitment into the Official Community Plan, Saanich identified the opportunity to be an example for other local governments and simultaneously transforming the municipality into a better place

to live. Additionally, the climate action plan helps reduce the community’s carbon footprint and reduce reliance on fossil fuels. The plan was designed to align with the PCP program, setting reduction goals and targets for corporate and community-wide emissions, while identifying actions to meet those targets to mitigate climate change (Saanich 2010). Table 4 shows the five implementation structural features of the Saanich Climate Action Plan.

Plan Outcomes. The 2012 Community Energy and Emissions Inventory (CEEI) reports from the Province of British Columbia have not been released. There is no data beyond 2010 for community-wide GHG emissions and energy use.

Table 4. Saanich climate action plan implementation structural features.

Structural Feature	Related Content	Source
Engagement	Project based; ~10 “core implementation partners”	Interview
Partner Actions	Municipality shares information; when opportunity arises, discuss ideas, find projects in Saanich to interact; partner with those familiar with issue already	Interview
Collaborative Oversight	Municipal staff puts together information; create programs and report to Council annually; Sustainability Coordinator	Interview
Communication	Climate action results communicated through Saanich Strategic Plan, and the Climate Action website, as well as through newsletters (ICLEI Canada 2013)	Document and Archival
	Social media; quarterly newsletters to public; capital regional district—quarterly meetings, municipalities can share work; media events	Interview
Monitoring	Public reports of progress are made to stakeholders (Saanich n.d.). Saanich reports to residents and Council through “Annual and Financial Reporting”, reports to the province through the “CARIP” (Climate Action Revenue Incentive Program), and reports internationally through the “Carbon Climate Registry” (Saanich n.d.).	Document and archival
	Annual reporting part of whole organization; CARIP reporting; 2012 CEEI (Community Energy and Emissions Inventory) report not officially launched; will create own estimates	Interview

3.2. *City of Guelph, Ontario: Community Energy Initiative (CEI)*

In 2006, the Consortium decided to formalize a long-term Community Energy Plan (CEP) which would guide the city's energy future for years to come (Garforth International llc 2007). The name of the plan changed from CEP to the current Community Energy Initiative (CEI), reflecting its entrance into the implementation phase (City Council Agenda n.d.). Guelph's goals under the plan are to use less energy in 25 years than they do today, consume less energy per capita than comparable Canadian cities, and produce less GHG per capita than the current global average (City Council Agenda 2016b).

Plan Purpose: Guelph has a population of 140,000 people including an additional of 20,000 students during the school year (City Council Agenda 2016d), and is situated in a region near enough to Toronto that it attracts population growth (Garforth International llc 2007). Guelph's population is expected to grow to 170,000 within the city by 2031 (City Council Agenda 2016d), supported by commercial and industrial development activities. This translates to an addition of homes plus industrial growth. The City has committed to implementing an energy plan that can support the population growth and help with competitiveness and environmental performance (Garforth International llc 2007). Table 5 shows the five implementation structural features of Guelph's Community Energy Initiative.

CEI Update: An upcoming CEI update was expected to be provided to Council in Spring 2017, with progress reports given to Council regularly (City Council Agenda 2016c). Of the three main scopes, two are closely related to this study. One is to re-focus the CEI as a community-led initiative, by empowering stakeholders to decide on the priorities and lead initiatives, and another, to develop progress metrics and compare to other municipalities by coordinating reporting protocols (City Council Agenda 2016c). Some closely relevant principles of a CEI update include, "Community-based governance, oversight and reporting; improved community engagement with local stakeholders; clarity on the role of the Local Government, Agencies and stakeholders; partnering with external third party advocacy and support groups; rigorous analysis, reporting and oversight in support of developing acceptable baseline targets and communicating measurable results" (City Council Agenda 2016a, p. 149).

Plan Outcomes: The CEI was adopted in 2007. From 2006–2012, energy usage has decreased 17.6% per capita, and GHG emissions decreased by 26.3% per capita since 2006, while the total population increase was 21.7% (Guelph Hydro Inc. 2013). A staff report mentions, "Energy and Emission per capita fell in early stages but remained stalled" (City Council Agenda 2016a, p. 117). GHGs and energy use per capita have been "roughly at the same level" (City Council Agenda 2016a, p. 140)

since 2009. A decrease in fossil fuel based electricity supplied to Guelph contributed the early decreases while the stabled indicators are the result of ongoing overall improvements in efficiency offset by growth (City Council Agenda 2016a). Currently, an update of the CEI is in progress at the time of study.

Table 5. Community energy initiative implementation structural features.

Structural Feature	Plan	Source
Engagement	Informal engagement; ad-hoc; task force ended 2012; will be recruiting for a task force; ~6 “core implementation partners”	Interview
Partner Actions	Defining the role of local governments in CEI update; The city provides leadership and planning; major project—district energy system involved utility, local customers, development community, public input; Major project—energy efficiency retrofit strategy	Interview
Collaborative Oversight	Municipal oversight; Future task force—oversight role; Manager, Community Energy	Interview
Communication	Webpage; social media; CEI update to Council results in communication to community; council meetings publicly presented and activities related to CEI results in communication and outreach	Interview
Monitoring	To monitor progress towards targets an <i>Energy and Emissions Monitoring Report</i> is prepared every year by The City of Guelph, assisted by Guelph Hydro Inc. (Guelph Hydro Inc. 2013). Currently refreshing Community Energy Initiative; Future task force– monitoring role; reports on website; update to 2015—unpublished	Document and Archival Interview

3.3. City of North Vancouver, British Columbia: Community Energy and Emissions Plan (CEEP)

Plan Purpose: The City of North Vancouver has relatively low per capita emissions, the CEEP is fundamentally about deepening actions around land use, development, waste management and other activities to deepen emissions reductions (HB Lanarc 2010). The CEEP is also the analysis document to support the Amendment of the Official Community Plan (OCP) in order for North Vancouver to comply with the Local Government Act which requires local governments to have GHG reduction targets, policies and actions (HB Lanarc 2010).

The Community Energy and Emissions Plan’s objectives are to “develop a climate and energy vision that supports core City priorities; develop a high level framework that builds on and guides existing City activity, with new sector-specific policies and actions; estimate the near-term costs of climate and energy-related policies and actions; develop defensible and meaningful greenhouse gas reduction target(s)” (HB Lanarc 2010, p. 5). Table 6 presents the five implementation structural features of North Vancouver’s Community Energy and Emissions Plan.

Table 6. Community energy and emissions plan implementation structural features.

Structural Feature	Plan	Source
Engagement	No formalized structural feature; ~5 “core implementation partners”; known organizations added as appropriate	Interview
Partner Actions	City collaborates with organizations to implement programs	Interview
Collaborative Oversight	Council is the decision-making body; staff committee reviews progress; Section Manager, Environmental Sustainability	Interview
Communication	Meetings; emails; no formal network Webpage; CARIP (Climate Action Revenue Incentive Program) reporting (City of North Vancouver n.d.a.)	Interview
Monitoring	Council and staff committee monitors progress of plan; meetings to review progress of implementation and provides update to Council; partners—roundtable sharing of work; monitors emissions (transportation); make adjustments as progress; 2020—due for renewal; no data past 2010 (CEEI); look at programs being implemented; working on data for inventory	Interview

Plan Outcomes: There is no data beyond 2010 for community-wide GHG emissions and energy use due to a delay in the CEEI reports. However, the City is looking at programs being implemented and measuring available emissions (transportation). Overall, North Vancouver’s implementation of the Community Energy and Emissions Plan involves all five implementation structural features, and partner outcomes of each capital type were found. However, monitoring for community-wide GHG emissions and energy is not at a frequency which allows for recent community-wide energy and emissions to be known. This occurs because the CEEI is delayed.

3.4. City of London, Ontario: Community Energy Action Plan (2014–2018) (CEAP)

Overall Goals of the London Energy Connections Program:

- “Increase the local economic benefit of sustainable energy use through” cost savings from energy conservation and energy efficiency, revenue from local production of clean and green energy products, and job creation associated with product and service providers engaged in these activities (Corporation of the City of London 2014, p. 6).
- Reduce the environmental impact associated with energy use, through GHG reduction targets consistent with the Province of Ontario’s goals, namely: 15% reduction from 1990 levels by 2020, 37% reduction from 1990 levels by 2030, and 80% reduction from 1990 levels by 2050 (City of London 2019).

Plan Purpose: The plan’s goal is for the City to meet the provincial GHG targets using ways that generate financial payback or at minimum financially break even within a 10-year time frame (Corporation of the City of London 2014). In the past 15 years, the City has been concerned with energy use mainly for environmental reasons (Donnelly et al. 2016). The residents of London have been contributing to smog-forming emissions, mainly from fossil fuel energy use (Donnelly et al. 2016). As prices for energy increase, the community is becoming more aware of the financial costs of energy consumption, leading many people to become aware of their own consumption and seeking ways to conserve energy (Donnelly et al. 2016). Table 7 shows the five implementation structural features of the Community Energy Action Plan.

Table 7. Community energy action plan implementation structural features.

Structural Feature	Plan	Source
Engagement	Identify the “influencers” in the community (individuals, organizations, neighborhoods etc.), and develop engagement and enlisting strategies (Donnelly et al. 2016); ~22 key stakeholders in action plan elements (Corporation of the City of London 2014); local businesses, local institutions and the local community are key community energy stakeholders (Corporation of the City of London 2014); “explore interest bringing Sustainability CoLab’s ‘Regional Carbon Initiative’ concept” to the city (Donnelly et al. 2016, p. 14).	Document and Archival
	Reach Londoners through community associations and employers; Ad-hoc relationships, work with stakeholders on specific activities; key stakeholders’ activities are in the plan; there are stakeholders who committed to action for inclusion in plan	Interview

Table 7. Cont.

Structural Feature	Plan	Source
Partner Actions	<p>Role in playing “connect the dots” between key community stakeholders, their activities, and roles stakeholders can have in the CEAP (Donnelly et al. 2016)</p> <p>City staff participated in steering committee that established the London Environmental Network, including groups with an energy focus (Donnelly et al. 2016)</p> <p>City staff are influencers through Active and Green Communities (Donnelly et al. 2016)</p> <p>City staff co-hosted the “Corporate Leadership for a Greener London” business engagement event with Labatt Brewery (Donnelly et al. 2016)</p>	Document and Archival
Collaborative Oversight	Municipal staff oversees plan progress, reports back to community and Council; Manager, Air Quality	Interview
Communication	<p>In public education materials, easily comprehensible infographics are used, and are well received (Donnelly et al. 2016)</p> <p>Ongoing conversations, implementation and collaborations an essential component of the London Energy Connections Program (Donnelly et al. 2016)</p>	Document and Archival
	‘Reduce Impact’ website, encourage Londoners and stakeholders to post projects	Interview
Monitoring	<p>London Hydro and Union Gas provided utility data between 2011–15 (Donnelly et al. 2016)</p> <p>Annual Community and GHG Emissions Inventory reports for 2013, 2014, and 2015 (Donnelly et al. 2016)</p> <p>The CEAP is a dynamic document, when actions are added from new opportunities, it will be included in progress reports (Corporation of the City of London 2014)</p> <p>Publish reports on city-led plan actions annually (Corporation of the City of London 2014).</p> <p>Some stakeholders provided information about their own actions for the plan, and it is proposed a next step is to contact stakeholders that provided information about their actions for the plan for an update of partner actions (Donnelly et al. 2016)</p>	Document and Archival
	<p>Future plans to reach out to stakeholders (that provided information for action) for updates; London Energy Connections Program— An ongoing program for developing, implementing and tracking the current Community Energy Action Plan and subsequent plans</p>	Interview

Plan Outcomes 2015:

- Total community energy use in 2015 was 16% above 1990 levels (City of London 2016), down from 18% above 1990 levels in 2014 (City of London 2015) but is below “business as usual” forecast in 1990, demonstrating impact of recent energy conservation activities (City of London 2016);
- Per capita energy use in 2015 was 6% below 1990 levels (City of London 2016), compared with 4% below 1990 levels in 2014 (City of London 2015). Biggest improvement in residential energy use per capita, attributing to energy efficient appliances, retrofits and new home construction (City of London 2016);
- Total GHGs in 2015 were 8% lower than 1990 levels (City of London 2016), compared with 6% below 1990 levels in 2014 (City of London 2015);
- Per capita GHG emissions in 2015 was 25% lower than 1990 levels (City of London 2016) compared with 24% lower than 1990 levels in 1990 (City of London 2015).

Examples of Plan Outcomes Context:

- Cold winter of 2015 influenced space heating and process heating needs for industrial, commercial and institutional buildings (City of London 2016);
- 6% energy use in 2015 from 1990 levels related to industrial, commercial and institution sector partially due to aftermath of the 2008–2009 recession, but efforts have been increased by local utilities to promote energy conservation and demand management (City of London 2016);
- Cold winter of 2014 increased demand for natural gas which was reflected in energy use especially residential sector, but there were still improvements in residential sector possibly due to energy efficiency of consumer appliances, home retrofits, space heating and cooling systems and new home construction (City of London 2016). Residential energy per capita 5% lower than 1990 in 2014 (City of London 2015) compared with 13% lower in 2015 (City of London 2016).

4. Results and Discussion

4.1. Cross-Case Comparisons

Table 8 summarizes the presence of the five implementation structural features and plan outcomes, and Table 9 presents partner outcomes across the four communities.

Table 8. Cross case comparison of implementation structural features and plan outcomes.

Implementation Structural Feature	Saanich	Guelph	North Vancouver	London
Engagement	Present	Present	Present	Present
Partner Action	Present	Present	Present	Present
Collaborative oversight	Municipality oversees	Municipal oversight, upcoming task force	Municipality oversees	Municipality oversees, exploring partnership approach
Communication	Present	Present	Present	Present
Monitoring	Present, but community energy and emissions delayed	Present	Present, but community energy and emissions delayed	Present
Plan Outcomes (GHG and Energy)	Recent community GHG and Energy undetermined	Community GHG and energy use decreased per capita from 2006 to 2012, decreased in early stages, and stalled	Recent community GHG and Energy undetermined	2015: per capita energy below 1990 levels and total energy above 1990 levels 2015: total and per capita GHGs lower than 1990 levels, decreased from 2014

Table 9. Partner outcomes across municipalities.

Capital Type	Resources Gained	Reduction	Count
Human Capital	Inductive—Moral Support	Provide guidance, motivation; comfort not on own; verifies on the right track	3
	Knowledge and Learning	Partners are specialists; increase understanding, awareness; input into best practices; more opinions, options; creating awareness of programs, opportunities and barriers; experience and knowledge shared	6
	Accessed Marketing Opportunities	Bring awareness to program; larger audience reach from outreach channels; Access to markets	3
	Increased Impact on Community Sustainability	Progress made with organizations; motivating people for mitigating climate change; accelerating to low carbon economy x 2; achieve mission and vision; better solution for community; opportunity to benefit the residents—double incentives; reduce GHG emissions through communities x 2; drive energy efficiency; helping advance projects; successful on mitigation work; plan continuation; availability and adoption of electric vehicles in region; leveraging strengths of partners	15

Table 9. Cont.

Capital Type	Resources Gained	Reduction	Count
Organizational Capital	Accessed Business Opportunities	Funding; grant	2
	Influence	Increase support; common voice to provincial government; influence; ensure support	4
	Innovation	Awareness and ideas—innovation	2
	New Resources	Local governments have tools	1
	Relationships	Relationship building; strengthened relationships with provincial government; bring together business and community; introduced to stakeholders; connect community together; building stronger relationships; access to relationships	7
	Reputation	Seen as leaders; benefit to reputation; reputation improved; identify community doing interesting things; preferred organization for advisory groups	6
	Sustainability Programs	Project implementation; creating programs; launching program; expand programs	4
Physical Capital	Increased Capacity	Additional funding; pool resources to do projects	2

4.2. Implementation Structural Features

In all the municipalities, communication systems, individual partner organizations implementing actions, and key partner engagement were present, validating the collaborative strategic management literature (e.g., Clarke 2011; Selin and Chevez 1995). The empirical and literature differences are related to oversight, and to the monitoring structural features. Currently, it is the municipalities who are entirely responsible for the oversight of the community plan, thus there are no collaborative oversight entities, which Clarke (2011) identified as an important structural feature for partnerships. However, Guelph’s plan is undergoing an update where a principle for the update is “Community-based governance, oversight and reporting; improved community engagement with local stakeholders” (City Council Agenda 2016a, p. 149).

Guelph’s Community Energy Initiative in 2010 had engaged stakeholders on a Task Force, but the mandate expired in 2012 (City Council Agenda 2016a). The terms of reference for the upcoming Task Force states that the Task Force is for providing “a forum for community-based stakeholder guidance, oversight and reporting to the community and to Council during the update of the Community Energy Initiative” (City Council Agenda n.d., p. 1). Collaborative governance is useful for connecting cross-sector stakeholders together, giving them a chance to interact (Ansell and Gash 2008). Guelph is putting this structural feature in place in comparison with other case communities because one of the plan’s scope is to

focus the plan as a community-led initiative (City Council Agenda 2016c). Even with collaborative governance, local authorities have a key role in coordinating partner actions and getting the community involved with policy programs (Aylett 2014; Betsill and Bulkeley 2006; Castan Broto and Bulkeley 2013).

In terms of monitoring, all of the cases have monitoring structural features that include reporting and opportunities for renewal. However, monitoring of GHG and energy use in both British Columbia-based municipalities (Saanich and North Vancouver) are delayed due to delays in the provincial reporting. In these cases, instead of the local government or partnership undertaking the reporting, it is undertaken by the province (i.e., state-level government). This raises the question regarding to what extent an implementation structural feature should be in place, and which entity should be responsible for it.

What was also found was that for partner engagement, core partners are engaged on an ad-hoc, and activities bases, similar to partner engagement for climate adaptation, partners were also found to be engaged on an ad-hoc basis (Hughes 2015). As this was generally similar across the municipalities, this may be a context-specific characteristic of the engagement structural feature, rather than the size of the partnerships. Yet, local sustainability partnerships can reach 800+ partners (Clarke and Ordonez-Ponce 2017), so it seems Canadian municipalities are under-utilizing this collective action opportunity.

4.3. Plan and Partner Outcomes

For plan outcomes of the municipalities, looking at GHG and energy targets, both North Vancouver and Saanich have uncertain GHG and energy outcomes due to delays in monitoring and reporting. Both Ontario municipalities (Guelph and London) have had an overall decrease of GHG levels and energy use since the adoption of the plans studied. However, even though Guelph's plan outcomes have leveled off, its key informant provided an important reminder that outcomes for long-term strategic plans may not be linear, and that methodologies for assessment may also be a consideration. For example, emissions calculations for transportation can be derived from calculating fuel consumed citywide, while kilometers travelled for vehicles may also be used (The World Bank 2011). Similarly, London's reports provide important insight into the external factors that can influence energy use and GHG emissions including seasonal climates, population change, economic factors, and provincial energy decisions. Overall, these municipalities may be considered to be quite successful as they have achieved milestone 5 of the PCP program in the community stream. Equally important, these municipalities continue to implement

and have programs ongoing to mitigate climate change, renewing plans even after having achieved milestone 5. That said, these communities are likely not on track for their longer-term deep decarbonization targets unless they revise their approach. This raises questions about partnerships failing (e.g., Bryson et al. 2006), and what factors might be responsible for that failure. Is it external factors, such as the leadership from other levels of government (Glasbergen 2007; Gray and Stites 2013), or will a renewal of the partnership structure and implementation efforts (Clarke 2014) enable success?

Partner outcomes were collected from core implementation partner organizations, and it was found that they are identical to the previous sustainable community plan findings in the capital types and resources gained (Clarke and MacDonald 2019). A new partner outcome captured in two instances may be grouped together as moral support, as part of human capital. Collaborative implementation can provide guidance, motivation and verification of efforts. This new partner outcome finding—which is different from the context of community sustainability plans—may be because the partnerships created for community-wide climate and energy purposes are relatively newer. Comparatively, not many communities have reached milestone 5 of the PCP program in the community stream, and the communities studied are leaders in this regard. Therefore, it may be for these reasons that moral support in this emerging space was discovered as a partner outcome from collaboration. Two outcomes, in relation to those elaborated by Clarke and MacDonald (2019), were not found in this context—increased capacity due to a new engagement mechanism and cost savings. This may be due, in general, to the size of the partnerships and/or the partners' functions.

4.4. Implementation Partners

Another important discussion is the concept of implementation partners. This study began with the definition of implementation partners as organizations that are implementing or helping to implement the plan. However, using this broad notion, there was some difficulty in quantifying the number of implementation partners in some interviews, as results show the partnerships are not yet formal entities in this context. Core implementation partners tend to be organizations that are involved more in implementation and/or over the longer term, which in this context will include the natural gas utilities. These core implementation partners were the organizations that were engaged in the interviews of this research. It is important for core implementation partners to be identified, engaged and have positive relationships to be sustained for the long-term implementation (Ansell and Gash 2008; Waddock 1988) of GHG

and energy plans. A key concept to revisit is key partners which are major users, and emitters of GHG and energy (such as natural gas utilities). Ideally, key partners are engaged as core implementation partners with a commitment to decarbonization. This challenge seems to be implicitly reflected in the literature, since a scan of the literature does not seem to reveal a definition of partners which must specifically be for implementation, for social problems of this nature (sustainability/climate change), therefore making quantification difficult, especially since a broader sense was used. It is important to distinguish implementation partners since, for example, in climate adaptation planning, partnerships for the planning phase do not always carry through to the implementation phase (Hughes 2015) and new partners can be added in the implementation phase (Clarke 2014).

4.5. Relationship between Structural Features and Plan Outcomes

CSSPs create public value, beyond what is possible from a single organization (Bryson et al. 2006; Gray and Stites 2013; Waddock 1991). Overall, for the relationship between structural features and plan outcomes, it is that partnership structural features during plan implementation are important for enabling the achievement of plan outcomes (GHG emissions and energy use). The structural features are interrelated and inherently, if individual partners do not take action within their own organizations, there would be less progress (Clarke 2011). Ideally, completing these actions and making progress, will help a community to reach its ultimate plan goals of GHG and energy use reduction that can also bring along to the community a wide range of benefits.

Revisiting Saanich and North Vancouver in the cross-case comparison table (Table 7), it can be seen that the “absence” of a structural feature affects the plan outcome, specifically for the implementation structural feature of monitoring to make plan outcomes uncertain in these municipalities. At the same time, the presence of all the implementation structural features (i.e., London and Guelph) helps to show that these implementation structural features are important for enabling the achievement of plan outcomes. From the patterns shown in a cross-case presentation of the case studies, where these five implementation structural features (Clarke 2012) are present for the implementation of the plan, then plan outcomes are in the direction that is desired for achieving plan goals. Both Guelph and London have an overall decrease of GHG levels and energy use since the adoption of the plans studied. The context of climate and economy are also influencers of GHG and energy usage levels, which is consistent with the literature (Glasbergen 2007; Selin and Chevez 1995; The World Bank 2011). In addition to the GHG and energy

decrease, it is evident that collaborative implementation has led to an increase in community sustainability as mentioned by interviewees and captured as part of partner outcomes. Partner action and partner engagement are particularly essential to have achieved community-wide impacts.

As contextual factors influence GHG emissions and energy use, it needs to be considered and it may be beneficial to explore project-level impacts of the plan (such as project-level quantification of GHG reductions) to complement the information found in an overall community inventory for assessing interventions, since community-wide inventories capture both interventions and contextual factors. As mentioned in London's 2015 Community Energy and GHG Inventory, "Whether emissions continue to decrease depends upon the impact of energy and fuel conservation efforts, Ontario's upcoming Climate Change Action Plan, climate trends, economic growth, and consumer choices" (City of London 2016, p. iv).

4.6. Relationship between Structural Features and Partner Outcomes

In CSSPs, benefits can be experienced by individuals, organizations, various sectors and by society (Clarke and Fuller 2010; Selsky and Parker 2010; van Tulder et al. 2016). Generally, partnership design, including structural features, determine value generation for partners (Austin and Seitanidi 2012; Clarke 2014). For partner outcomes, when organizations are involved as core partners, benefits are expected to be experienced by the partners (Clarke and MacDonald 2019). The relationship between implementation structural features and partner outcomes validates the literature. While it is partnership design in general that can determine value for the partners, for the partner outcomes (Austin and Seitanidi 2012; Clarke 2014), partner action, partner engagement, and communication may be particularly important structural features to enable this. Through partner taking actions, they are enabled to experience partner outcomes. For example, partner outcomes such as increasing community sustainability, increasing capacity, and gaining reputation would not be enabled if organizations did not act. Partners also need to be engaged, for example to enable partner outcomes such as influence and relationships (Ansell and Gash 2008; Waddock 1988). Further, communication activities are useful for commending progress, engaging partners and disseminating best practices (Clarke 2012), which helps to achieve outcomes such as knowledge and learning and relationships. All structural features are interrelated (Clarke 2011) and it is likely that partnership design as a whole that determines partner outcomes.

5. Conclusions

The first research question is about the applicability of research done on collaborative community sustainability partnerships to the context of community climate action plans. Overall, this study helps to show that the five implementation structural features (Clarke 2011; Clarke 2012) are important for helping to achieve plan outcomes and partner outcomes in the context of local climate action. The majority of partner outcomes were also validated, with one new addition and two not found in this context. Specifically, it was found that partners can experience moral support as a human capital outcome from collaborative implementation, an outcome that is unique when compared with partner outcomes from implementing community sustainability plans (Clarke and MacDonald 2019).

The second research question is about the relationships between partnership structural features and plan and partner outcomes. This was discussed in Sections 4.5 and 4.6, where the findings indicate that relationships are likely present in these cases. Further studies are needed to validate this with a large statistical analysis.

The third research question is about what collaborative structures, plan outcomes and partner outcomes are present. This empirical question is best seen in Tables 8 and 9. These are discussed in Sections 4.2 and 4.3. These findings provide insights to those interested in climate mitigation and designing partnerships.

Additionally, conducting the study showed the need for better clarity on defining partners, which is discussed in Section 4.4. Thus, this chapter also explores the concept of core implementation partners and the possibility of various formality of partners during the implementation of collaborative sustainability strategies. Core implementation partners are organizations that tend to be involved more in implementation and/or over the longer term, which in this context includes utilities.

One limitation of this research is that it uses qualitative techniques when examining relationships. However, this study benefitted from an analysis that was based on interviewing knowledgeable informants, sound theory, as well as documents and archival data that contained a wealth of information. Now that the variables have been validated and improved through this qualitative work, a larger quantitative study could be conducted to consider the relationships more accurately. Another limitation is that it is unsure whether all partner outcomes are applicable to all municipalities outside of those studied. This is, in part, due to the small number of partners interviewed, and as there are varying ratios in the mix of types of partners in each sector in different municipalities. Further, another limitation is that it is unknown how completely transferable learnings from this research may be to municipalities outside of those in either British Columbia or Ontario with

comparable or less population size, and different regional contexts. These research design limitations offer opportunities for future research directions.

Future research could ask the question of the extent implementation structural features should be in place. This question of extent stems from the monitoring structural feature studied in this research. In two municipalities, monitoring energy and emissions through the province is present, but it has not been released for some time. In addition, implementation partners, or levels of, need to be defined for social partnerships. If a quantitative version of this study were to be conducted, project-level quantification of GHGs could be explored to complement the information with an overall community inventory, since community-wide inventories capture both interventions and contextual factors.

For SDG 17, this study shows the importance of cross-sector partnerships at the local scale, and not just at the international scale. Localizing the SDGs and local action is critical for global progress on most of the Global Goals (MacDonald et al. 2018). Cross-sector partnerships will be an important mechanism to achieve progress at the local level, so it is useful to consider target 17.17 at this scale. For climate mitigation in particular, it is clear that cross-sector partnerships will need to be well designed to support communities to achieve the newer, more ambitious goal of carbon neutrality by 2050 (IPCC 2018).

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Appendix A. Municipal Informant Interview Guide

Introduction²

Read: The purpose of this research is to provide insights into designing cross-sector partnerships effective for achieving community-wide GHG emissions targets by examining implementation structures and outcomes in community climate action plans. Through this interview I hope to learn more about your community climate action plan implementation structures, as well as plan and partner outcomes. Some questions will have additional information beside it, such as definitions and examples.

Read: Do you have any questions before we begin?

Note in case of more info requested: Key structural features for implementation of a plan are structures in place that help to facilitate the implementation of a plan. For example, communication systems, partner engagement and attraction mechanisms, collaborative oversight arrangements, monitoring systems, and individual partner actions.

Interview Questions

Q1: What is your role or position in the climate action plan?

Q2: When was the community-wide climate action plan adopted? Began implementation?

Q3: How many partners are taking part in the implementation phase of the community-wide climate action plan, either implementing or helping to implement? (*More info: Partners are anyone or organization who is helping to implement the community plan. Partners can be found in various sectors such as NGOs, regional governments, electric utility, schools, school boards, gas utility, higher education institutions, business improvement areas, citizen groups, financial institutions, large companies, conservation authorities etc.*)

Q4: Can you provide a list of the partners who are implementing your community's climate action plan at the end of this interview?

Q5: Does your plan engage key organizations from different sectors and have a way to identify and add them?

If so, how?

(*ex. engaged as formal/ informal partners, task forces, partner committees etc.*)

Q6: Does the plan have a collaborative oversight body to oversee implementation and for decision making?

Who is involved in the collaborative oversight?

² The interview guide is attached, showing script and questions presented to the interviewees.

More info: Collaborative arrangement in place to oversee strategy formulation and implementation. (for example, committee or board, or staff coordinator, an NGO that oversees this? A decision making body? Etc.)

Q7: Do the individual partner organizations implement within their own organizations?

(ex. partners delegated tasks, partners voluntarily commit to actions within organization aligning with plan etc.)

Q8: Are there examples of joint implementation efforts by the partnership as a whole?

Q9: What communication system is used to allow communication to, and between partners relating to the plan?

More info: Communication—A communication system to maintain networking and knowledge sharing (ex. to reach citizens, to network? Partners provide updates annually, a communications plan, e-mails, galas, newsletters, secretariat manages website etc.)

Q10: What are the monitoring processes in place?

More info: allows progress to be assessed, adjustments made, plan renewal (ex. partners provide progress reports, secretariat monitors, committee decides on renewal etc.)

Q11: How does the current monitoring system allow for progress assessment, plan adjustment and plan renewal?

Q12: What progress has been made towards the emissions reductions target?

Q13: What collaborative actions have been implemented by the municipality?

(ex. coordinate tasks, provide community-wide budget, leading tasks and initiatives etc.)

Q14: What has been the experience (ex. benefits or disadvantages) to the municipality from collaborative implementation with partners?

More info: Partner outcomes are outcomes that partners experience from the collaboration. (Ex. improved networking and learning, improved reputation, community cohesiveness, progress towards goals, financial savings, relationships etc.)

Q15: Would there be another person in your organization who may have a perspective on this?

Q16: Do you have any questions for me?

Appendix B. Partner Interview Guide

Introduction

Read: The purpose of this research is to provide insights into designing cross-sector partnerships effective for achieving community-wide greenhouse gas (GHG) emissions targets. One main component is examining outcomes that partners experience as a result of acting to help decrease GHGs. Through this interview I hope to learn more about your organization's actions and outcomes as it relates

to contributing to progressing towards GHG emissions targets in the municipality. Some questions will have additional information beside it, such as definitions and examples.

Read: Do you have any questions before we begin?

Interview Questions

Q1: What is your role as it relates to the climate action plan?

Q2: Has your organization been implementing?

Q3: If so, what is your organization doing and/or has accomplished?

Q4: What have been the outcomes to the organization as a result of the implementation?

More information: Partner outcomes are outcomes that partners experience from the collaboration. (Ex. benefits, disadvantages, improved networking and learning, improved reputation, financial savings, etc.)

Q5: Do you have any questions for me?

References

- Ansell, Chris, and Alison Gash. 2008. Collaborative Governance in Theory and Practice. *Journal of Public Administration Research and Theory* 18: 543–71. [CrossRef]
- Arya, Bindu, and Jane Salk. 2006. Cross-Sector Alliance Learning and Effectiveness of Voluntary Codes of Corporate Social Responsibility. *Business Ethics Quarterly* 16: 211–34. [CrossRef]
- Austin, James E., and Maria May Seitanidi. 2012. Collaborative Value Creation: A Review of Partnering Between Nonprofits and Businesses: Part 2: Partnership Processes and Outcomes. *Nonprofit and Voluntary Sector Quarterly* 41: 929–68. [CrossRef]
- Averill, Jennifer. 2002. Matrix Analysis as a Complementary Analytic Strategy in Qualitative Inquiry. *Qualitative Health Research* 12: 855–66. [CrossRef] [PubMed]
- Aylett, Alexander. 2014. *Progress and Challenges in the Urban Governance of Climate Change: Results of a Global Survey*. Cambridge: MIT Press.
- Betsill, Michele, and Harriet Bulkeley. 2006. Cities and the Multilevel Governance of Global Climate Change. *Global Governance* 12: 141–59. [CrossRef]
- Bryson, John M., Barbara C. Crosby, and Melissa Middleton Stone. 2006. The Design and Implementation of Cross-Sector Collaborations: Propositions from the Literature. *Public Administration Review* 66: 44–55. [CrossRef]
- Bryson, John M., Barbara C. Crosby, and Melissa Middleton Stone. 2015. Designing and Implementing Cross-Sector Collaborations: Needed and Challenging. *Public Administration Review* 75: 647–63. [CrossRef]

- Bulkeley, Harriet, and Michele Betsill. 2005. Rethinking Sustainable Cities: Multilevel Governance and the 'Urban' Politics of Climate Change. *Environmental Politics* 14: 42–63. [CrossRef]
- Castan Broto, Vanesa, and Harriet Bulkeley. 2013. A Survey of Urban Climate Change Experiments in 100 Cities. *Global Environmental Change* 23: 92–102. [CrossRef]
- City Council Agenda. 2016a. Available online: http://guelph.ca/wp-content/uploads/council_agenda_042516.pdf (accessed on 1 January 2017).
- City Council Agenda. 2016b. Community Energy Initiative. Available online: <http://guelph.ca/plans-and-strategies/community-energy-initiative/> (accessed on 10 January 2017).
- City Council Agenda. 2016c. Community Energy Initiative Update. Available online: <http://guelph.ca/plans-and-strategies/community-energy-initiative/community-energy-initiative-update/> (accessed on 10 January 2017).
- City Council Agenda. 2016d. Guelph Quicksheet. Available online: <http://guelph.ca/business/economic-development-office/guelph-quicksheet/> (accessed on 10 January 2017).
- City Council Agenda. n.d. Community Energy Initiative Update Task Force Terms of Reference. Available online: <http://guelph.ca/wp-content/uploads/CEI-Task-Force-Terms-of-Refernce.pdf> (accessed on 10 January 2017).
- City of London. 2015. 2014 Community Energy & Greenhouse Gas Inventory. Available online: <https://www.london.ca/residents/Environment/Energy/Documents/2013-Inventory-Report.pdf> (accessed on 20 January 2017).
- City of London. 2016. 2015 Community Energy & Greenhouse Gas Inventory. Available online: <https://www.london.ca/residents/Environment/Energy/Documents/2015%20Inventory%20Report.pdf> (accessed on 20 January 2017).
- City of London. 2019. Community Energy Action Plan. Available online: <https://www.london.ca/residents/Environment/Energy/Pages/Community-Energy-Action-Plan.aspx> (accessed on 20 June 2020).
- City of North Vancouver. n.d.a. Climate Action. Available online: <http://www.cnv.org/your-government/living-city/climate-action> (accessed on 30 January 2017).
- City of North Vancouver. n.d.b. Community Energy and Emissions Plan. Available online: <http://www.cnv.org/Your-Government/Living-City/Climate-Action/Community-Energy-and-Emissions-Plan> (accessed on 1 September 2016).
- Clarke, Amelia. 2011. Key Structural Features for Collaborative Strategy Implementation: A Study of Sustainable Development/Local Agenda Collaborations. *Management & Avenir* 50: 153–71. [CrossRef]
- Clarke, Amelia. 2012. *Green Municipal Fund. Passing Go: Moving Beyond the Plan*. Ottawa: Federation of Canadian Municipalities.

- Clarke, Amelia. 2014. Designing Social Partnerships for Local Sustainability Strategy Implementation. In *Social Partnership and Responsible Business: A Research Handbook*. Edited by Andrew Crane and Maria May Seitanidi. London: Routledge, New York: Taylor & Francis.
- Clarke, Amelia, and Andrew Crane. 2018. Cross-Sector Partnerships for Systemic Change: Systematized Literature Review and Agenda for Further Research. *Journal of Business Ethics* 150: 303–313. [CrossRef] [PubMed]
- Clarke, Amelia, and Aftab Erfan. 2007. Regional Sustainability Strategies. A Comparison of Eight Canadian Approaches. *Plan Canada* 47: 15–19.
- Clarke, Amelia, and Mark Fuller. 2010. Collaborative Strategic Management: Strategy Formulation and Implementation by Multi-Organizational Cross-Sector Social Partnerships. *Journal of Business Ethics* 94: 85–101. [CrossRef]
- Clarke, Amelia, and Adriane MacDonald. 2019. Outcomes to Partner in Multi-Stakeholder Cross-Sector Partnerships: A Resource-Based View. *Business & Society* 58: 298–332. [CrossRef]
- Clarke, Amelia, and Eduardo Ordonez-Ponce. 2017. City Scale: Cross-Sector Partnerships for Implementing Local Climate Mitigation Plans. Virtual Issue: Climate Change and Public Administration. *Public Administration Review* 2: 24–27.
- Clarke, Amelia, Adriane MacDonald, and Eduardo Ordonez-Ponce. 2019. Implementing Community Sustainability Strategies through Cross-Sector Partnerships: Value Creation for and by Businesses. In *Business Strategies for Sustainability: A Research Anthology*. Edited by Helen Borland, Adam Lindgreen, Francois Maon, Véronique Ambrosini Beatriz, Palacios Florencio and Joelle Vanhamme. Aldershot: Gower Publishing.
- Corporation of the City of London. 2014. Community Energy Action Plan (2014–2018). Available online: <http://www.london.ca/residents/Environment/Energy/Documents/Community%20Energy%20Plan.pdf> (accessed on 20 January 2017).
- Crane, Andrew, and Maria May Seitanidi. 2014. Social Partnerships and Responsible Business. What, Why and How? In *Social Partnerships and Responsible Business*. Edited by Andrew Crane and Maria May Seitanidi. Routledge: London, New York: Taylor & Francis, pp. 1–12.
- Deangelo, Benjamin, and L. Danny Harvey. 1998. The Jurisdictional Framework for Municipal Action to Reduce Greenhouse Gas Emissions: Case Studies from Canada, the USA and Germany. *Local Environment* 3: 111–36. [CrossRef]
- Demuzere, Matthias, Kati Orru, Oliver Heidrich, Eduardo Olazabal, Davide Geneletti, Hans Orru, Ajay Bhave, Neha Mittal, Efrén Feliú, and Maija Faehnle. 2014. Mitigating and Adapting to Climate Change: Multi-Functional and Multi-Scale Assessment of Green Urban Infrastructure. *Journal of Environmental Management* 146: 107–15. [CrossRef]

- Donnelly, Patrick, James Skimming, and Jay Stanford. 2016. Community Energy Action Plan - Update and Status. Available online: http://sire.london.ca/view.aspx?cabinet=published_meetings&fileid=233757 (accessed on 20 January 2017).
- FCM. 2015. District of Saanich, BC Milestone Five. Available online: <http://www.fcm.ca/home/programs/partners-for-climate-protection/going-the-distance-milestone-5-success-stories/2013/district-of-saanich.htm> (accessed on 5 January 2017).
- FCM. 2016. City of Guelph, ON Milestone Five. Available online: <http://www.fcm.ca/home/programs/partners-for-climate-protection/going-the-distance-milestone-5-success-stories/2014/city-of-guelph.htm> (accessed on 5 January 2017).
- FCM, and ICLEI Canada. n.d. Partners for Climate Protection. Available online: https://www.fcm.ca/Documents/reports/FCM/FCM_PCPhandout_EN.pdf (accessed on 5 January 2017).
- Garforth International llc. 2007. Community Energy Plan Executive Summary. Available online: <http://guelph.ca/wp-content/uploads/CEI-executive-summary.pdf> (accessed on 20 January 2017).
- Glasbergen, Pieter. 2007. Setting the Scene: The Partnership Paradigm in the Making. In *Partnerships, Governance and Sustainable Development: Reflections on Theory and Practice*. Edited by Pieter Glasbergen, Frank Biermann and Arthur Mol. Cheltenham: Edward Elgar, pp. 1–25.
- Gray, Barbara. 1985. Conditions Facilitating Interorganizational Collaboration. *Human Relations* 38: 911–36. [CrossRef]
- Gray, Barbara, and Jenna P. Stites. 2013. *Sustainability Through Partnerships*. London: Network for Business Sustainability.
- Guelph Hydro Inc. 2013. City of Guelph Energy Usage & Greenhouse Gas Emissions Summary Report 2012. Available online: http://guelph.ca/wp-content/uploads/EnergyAndEmissionsReport_brochure.pdf (accessed on 10 January 2017).
- HB Lanarc. 2010. Community Energy and Emissions Plan City of North Vancouver. Available online: <http://www.cnv.org/your-government/living-city/climate-action/community-energy-and-emissions-plan> (accessed on 30 January 2017).
- Hughes, Sara. 2015. A Meta-Analysis of Urban Climate Change Adaptation Planning in the U.S. *Urban Climate* 14: 17–29. [CrossRef]
- Huxham, Chris, and Siv Vangen. 2000. Leadership in the Shaping and Implementation of Collaborative Agendas: How Things Happen in a (Not Quite) Joined-Up World. *Academy of Management Journal* 43: 1159–1175.
- ICLEI Canada. 2013. District of Saanich PCP Corporate and Community Milestones 4–5 Milestone Review. Available online: http://carbons.org/uploads/tx_carbonndata/Letter%20FCM%20PCP%20Milestones%204%20and%205%20Submission_04.pdf (accessed on 5 January 2017).

- ICLEI Canada, and FCM. 2008. Five-Milestone Framework for Reducing Greenhouse Gas Emissions. Available online: https://www.fcm.ca/Documents/reports/PCP/Five_Milestone_Framework_for_Reducing_Greenhouse_Gas_Emissions_EN.pdf (accessed on 5 January 2017).
- ICLEI Canada, and FCM. n.d. PCP Protocol. Available online: https://www.fcm.ca/Documents/reports/PCP/PCP_Protocol_Canadian_Supplement_EN.pdf (accessed on 5 January 2017).
- IPCC. 2018. Global Warming of 1.5 °C. An IPCC Special Report on the Impacts of Global Warming of 1.5 °C above pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty. Available online: <https://www.ipcc.ch/sr15/download/#full> (accessed on 5 August 2020).
- Koschmann, Matthew A., Timothy R. Kuhn, and Michael D. Pfarrer. 2012. A Communicative Framework of Value in Cross-Sector Partnerships. *Academy of Management Review* 37: 332–54. [CrossRef]
- MacDonald, Adriane, Amelia Clarke, Lei Huang, Mark Roseland, and Maria May Seitanidi. 2018. Cross-Sector Partnerships (SDG #17) as a Means of Achieving Sustainable Communities and Cities (SDG #11). In *Handbook of Sustainability Science and Research*. Edited by Walter Leal Filho. New York: Springer Publishing Company, pp. 193–209.
- MacDonald, Adriane, Amelia Clarke, Lei Huang, and Maria May Seitanidi. 2019. Multi-Stakeholder Partnerships for Sustainability: A Resource-Based View of Partner Implementation Structure to Outcomes. *Sustainability* 11: 557. [CrossRef]
- MacDonald, Adriane, Amelia Clarke, and Lei Huang. forthcoming. Multi-stakeholder Partnerships for Sustainability: Designing Decision-Making Processes for Partnership Capacity. *Journal of Business Ethics*. [CrossRef]
- Ordonez-Ponce, Eduardo, Amelia Clarke, and Barry Colbert. 2020. Collaborative Sustainable Business Models: Understanding Organizations Partnering for Community Sustainability. *Business and Society*. [CrossRef]
- Ranson, Stewart, Bob Hinings, and Royston Greenwood. 1980. The Structuring of Organizational Structures. *Administrative Science Quarterly* 25: 1–17. [CrossRef]
- Saanich. 2010. Climate Action Plan. Available online: http://www.saanich.ca/assets/Community/Documents/climate_action_plan_web.pdf (accessed on 5 January 2017).
- Saanich. n.d. Leading by Example. Available online: <http://www.saanich.ca/EN/main/community/sustainable-saanich/climate-change-energy/leading-by-example.html> (accessed on 5 January 2017).
- Seitanidi, Maria May, Dimitris Koufopoulos, and Paul Palmer. 2010. Partnership Formation for Change: Indicators for Transformative Potential in Cross Sector Social Partnerships. *Journal of Business Ethics* 94: 139–61. [CrossRef]
- Selin, Steve, and Deborah Chevez. 1995. Developing a Collaborative Model for Environmental Planning and Management. *Environmental Management* 19: 189–95. [CrossRef]

- Selsky, John W., and Barbara Parker. 2005. Cross-Sector Partnerships to Address Social Issues: Challenges to Theory and Practice. *Journal of Management* 3: 849–73. [CrossRef]
- Selsky, John W., and Barbara Parker. 2010. Platforms for Cross-Sector Social Partnerships: Prospective Sensemaking Devices for Social Benefit. *Journal of Business Ethics* 94: 21–37. [CrossRef]
- Sun, Xinyu, Amelia Clarke, and Adriane MacDonald. 2020. Implementing Community Sustainability Plans through Partnerships: An Examination of the Relationship between Partnership Structural Features and Climate Change Mitigation Plan Outcomes. *Sustainability* 12: 6172. [CrossRef]
- The World Bank. 2011. *Cities and Climate Change: Responding to an Urgent Agenda*. Washington: The World Bank.
- UN-Habitat. 2011. *Cities and Climate Change: Global Report on Human Settlements 2011*. Nairobi: UN-Habitat.
- United Nations. 2015. Transforming Our World: The 2030 Agenda for Sustainable Development. Available online: <https://sustainabledevelopment.un.org/post2015/transformingourworld> (accessed on 5 January 2017).
- United Nations Climate Change. 2020. Paris Agreement—Status of Ratification. Available online: <https://unfccc.int/process/the-paris-agreement/status-of-ratification> (accessed on 5 June 2020).
- van Tulder, Rob, Maria May Seitanidi, Andrew Crane, and Stephen Brammer. 2016. Enhancing the Impact of Cross-Sector Partnerships: Four Impact Loops for Channeling Partnership Studies. *Journal of Business Ethics* 135: 1–17. [CrossRef]
- Waddock, Sandra A. 1988. Building Successful Social Partnerships. *Sloan Management Review* 29: 17–23.
- Waddock, Sandra A. 1991. A Typology of Social Partnership Organizations. *Administration & Society* 22: 480–515.
- World Climate Research Programme. 2019. Global Research and Action Agenda on Cities and Climate Change Science—Abridged Version. WCRP Publication No. 13/2019. Available online: <https://www.wcrp-climate.org/WCRP-publications/2019/GRAA-Cities-and-Climate-Change-Science-Abridged-EN.pdf> (accessed on 5 June 2020).
- Yan, Xinya, Haiying Lin, and Amelia Clarke. 2018. Cross-Sector Social Partnerships for Social Change: The Role of Non-Governmental Organizations (NGOs). *Sustainability* 10: 558. [CrossRef]
- Yin, Robert K. 2011. *Applications of Case Study Research*. Thousand Oaks: Sage Publications.