

AN ECOLOGICAL POLITICAL ECONOMY OF CLIMATE URBANISM IN OTTAWA

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Abstract

Over the past few decades, decreased federal and provincial funding for municipal services and infrastructure has constrained municipal budgets and led to competitive, entrepreneurial styles of municipal governance. These structural changes have coincided with growing public demand for municipalities to protect the local environment and take action on climate change. Drawing on discourse analysis, historical research, and interviews, this thesis applies an ecological political economy (EPE) perspective to examine the influence of federal and provincial neoliberal policies on municipal environmental governance in Ottawa. The main argument of this thesis is that amidst global economic instability and a worsening climate crisis, the City is shifting to a ‘climate urbanism’ policy approach that positions Ottawa to compete globally for labour and capital investment to fund ‘low-carbon’ and ‘climate-resilient’ technological and infrastructure fixes. Strategically adopting discourses from global climate science, ‘climate urbanism’ is the City’s current attempt to reconcile ongoing fiscal challenges with worsening environmental problems and a neoliberal economic growth imperative. Over the past three decades, the City has co-opted environmental discourses to legitimize economic growth while externalizing the problematic consequences of this growth, contributing to deepening social and ecological crises. Case studies on the People’s Official Plan and the Herongate redevelopment demonstrate how Ottawa residents are contesting the City’s ‘climate urbanism’ by developing and advocating for grassroots policies that recentre social and ecological needs.

Résumé

Au cours des dernières décennies, les gouvernements fédérales et provinciales ont réduit le financement des services et de l'infrastructure municipaux entraînant des problèmes budgétaires pour les municipalités et un style de gouvernance basé sur un esprit de compétition et d'entreprise. Ces changements structurels ont coïncidé avec une demande publique croissante pour la protection de l'environnement et d'action contre les changements climatique. Cette thèse prend une perspective d'économie politique écologique (EPE) et présente les résultats d'une analyse du discours, d'une recherche historique et des entrevues pour examiner l'influence des politiques néolibérales fédérales et provinciales sur la gouvernance environnementale municipale à Ottawa. L'argument principal présenté dans cette thèse est que la Ville d'Ottawa avance une approche politique de « climate urbanism » dans une période d'instabilité économique mondiale et une crise climatique. Cette approche vise à attirer la main-d'œuvre et les investissements afin de financer les projets technologiques et d'infrastructure résilientes et à faible émission de gaz à effet de serre, tout en assurant qu'Ottawa réussira dans une économie mondiale. Adoptant stratégiquement des discours de la science climatique mondiale, la Ville adopte une politique de « climate urbanism » pour concilier les défis fiscaux avec des problèmes environnementaux et un impératif néolibéral pour la croissance économique. Au cours des trois dernières décennies, la Ville a coopté les discours environnementaux pour légitimer la croissance économique tout en externalisant les conséquences problématiques de cette croissance, contribuant à aggraver les crises sociales et écologiques. Des études de cas sur le People's Official Plan et le réaménagement de Herongate démontrent comment les résidents d'Ottawa contestent le « climate urbanism » de la Ville en élaborant et en prônant des politiques locales qui répondent aux besoins sociaux et écologiques.

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Chapter One: Introduction

Climate change is reshaping how we think of, live in, and manage cities. Local governments have been taking action on climate change for several decades (Betsill & Bulkeley, 2007), and climate action has come to be recognized as an urgent priority for cities around the world (Bulkeley & Betsill, 2013). As many national governments have failed to meet their international climate commitments, municipal governments have positioned themselves as leaders when it comes to climate response (Betsill & Bulkeley, 2006; van der Heijden, 2019). Globally, cities account for 70% of the world's greenhouse gas (GHG) emissions (Fausing, 2020), and municipal governments have the potential to significantly reduce GHG emissions by regulating land use, managing building development, planning transportation networks, and regulating energy and waste management (Deangelo & Harvey, 1998). Additionally, cities can transform ways of thinking about nature and social justice, questions that have been central to policy and academic debates on urban climate policy, given that the communities most vulnerable to climate change can also be made vulnerable through climate discourses and responses (Bulkeley et al., 2013). Like cities around the world, the City of Ottawa is scaling up its climate action: Ottawa's City Council declared a climate emergency in 2019, and the City of Ottawa has adopted city-wide greenhouse gas (GHG) emissions targets and numerous other climate-related plans, policies, and projects.

Environmental issues have been major areas of focus within municipal governance since the 1987 Brundtland report introduced the idea of 'sustainable development' (World Commission on Environment and Development, 1987) and popularized the mantra to "think global, act local" (Agyeman et al., 1998). Municipal sustainability policies have led to the construction of new greenspaces, 'green' and 'low-carbon' buildings, and infrastructure for

active transportation and public transit. For example, the City of Ottawa's Official Plans have sought to protect the environment, grow Ottawa's economy, and improve quality-of-life for residents by restraining urban sprawl, creating more housing in existing neighbourhoods, reducing private vehicle use, and protecting the city's natural and agricultural areas (City of Ottawa, 1991, 2003, 2021a). Coinciding with a period of significant economic restructuring by national and regional governments, municipal sustainability initiatives over the past several decades have reflected a 'sustainable urbanism' policy approach, which seeks to balance the need for making environmental improvements with the need to encourage economic growth. As national and regional governments have privatized infrastructure and cut funding for social programs, municipalities have competed for private sector investment amidst constrained municipal budgets (Brenner & Theodore, 2002; Harvey, 1989; MacLeod, 2002). As a result, urban sustainability has resulted in state-led gentrification through the implementation of an environmental policy agenda that aims to facilitate private sector urban development, often to the exclusion and displacement of low-income residents and those discriminated against on the basis of ethnicity or class (Adamo, 2012; Anguelovski, Connolly, Pearsall, et al., 2019; Bunce, 2009; Checker, 2011; Dooling, 2009; Hackworth & Smith, 2001; Kern, 2015; Teelucksingh, 2002). Urban residents, both long-term residents and residents who move in as a neighbourhood gentrifies, have contested these outcomes of sustainability policies, and in some cases, have developed alternative strategies that achieve environmental improvement while limiting gentrification (Checker, 2011; Curran & Hamilton, 2012). In Ottawa, sustainability policies seeking to increase building density were found to raise housing costs, constituting a policy-led gentrification process (Adamo, 2012). At the same time, Ottawa's GHG emissions have not declined as a result of these policies, and Ottawa has lost greenspace in recent years (City of

Ottawa, 2020b; Statistics Canada, 2021). The links between gentrification and municipal sustainability policy, which was often a marketing strategy to garner public and political acceptance for private sector development, suggests that the national, regional, and local political and economic context has significant implications for socio-ecological outcomes.

While sustainability has been a municipal policy priority for several decades, in recent years, the climate crisis has been a growing concern for governments and the public. Cities have begun positioning themselves as climate leaders, capable of implementing the climate policies needed to protect critical economies and infrastructures of cities and societies (Long & Rice, 2019). An emerging ‘climate urbanism’ approach to municipal governance builds on municipal sustainability policies of previous decades, as municipalities continue to implement downtown intensification strategies as well as seek new technological and infrastructure solutions to mitigate and adapt to climate change (Long & Rice, 2019). Recent years have been marked by the ‘infrastructuralization’ of municipal climate response (Westman & Castán Broto, 2020), as cities seek to mitigate GHG emissions through carbon budgeting and become climate-resilient through the provision of infrastructure like low-carbon buildings, zero-emissions zones, and green infrastructure, often funded through public-private partnerships (Long & Rice, 2019). The implementation of green and climate-resilient infrastructure has been uneven, as wealthier cities and neighbourhoods have built elevated buildings, parks, and infrastructure, flood-resistant flooring, and wind resistant infrastructure, particularly in high-end developments, while other municipalities have lacked the financial resources as well as the interest from global capital to fund these projects (Shi, 2020). Just as sustainability policies have been linked to environmental gentrification, there is concern that climate urbanism could displace low-income and/or racialized residents due to impacts of climate change, growing costs-of-living, and social

exclusion (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019; Anguelovski, Connolly, Pearsall, et al., 2019; Long & Rice, 2019). Municipal decisions on climate response will determine which residents and neighbourhoods will be protected from current and future climate hazards as well as which places will receive investment to improve neglected infrastructures like housing, transit, and park space (Shi, 2020). The emergence of climate urbanism raises questions about how and why municipalities adopt particular climate measures and the implications of these measures on residents and ecosystems.

1.1. Research problem

As the City of Ottawa continues developing and implementing its climate policies, more research is needed to understand the political and economic drivers behind its climate responses and the socio-ecological implications of these responses. First of all, the extent to which municipal climate urbanism approaches are shaping overall urban development policy necessitates further exploration and validation (Juhola, 2020). While climate urbanism trends in municipal governance have been recognized on a global scale, further examination into specific local processes and social conditions would shed light on how this governance style is becoming institutionalized (Juhola, 2020). Secondly, evidence that municipal climate responses are exacerbating gentrification and displacement (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019; Long & Rice, 2019) calls for further study on the impacts of climate urbanism on urban residents. In particular, analysing the impacts of neoliberal governance by national and regional governments on municipal policy, and the ways that residents are contesting and resisting these changes, reveals challenges and alternatives when it comes to local climate action. Given that there is no single vision of climate response, exploring the multiple approaches present in a given

locality can reveal complexities and possibilities of responses to climate change (Juhola, 2020). A growing body of research in ecological political economy (EPE) investigates how environmental policies have become implicated in states' economic policies and ideologies. EPE scholarship explores how ideas about the environment, sustainability, and climate change facilitate economic growth and the expansion of capital in the face of growing ecological and financial challenges (Jessop, 2012b; Sandler, 1994). This body of research raises questions about the connections between neoliberal governance, municipal environmental policy, and social and ecological outcomes. An EPE approach reveals the complex and interconnecting political, economic, and social dynamics that constitute municipal governance, and permits an investigation into how environmental policies advance a municipal governance style that facilitates private sector investment and profit. The interaction of changing political and economic considerations alongside environmental concerns (like climate change, biodiversity, waste, and energy scarcity) results in shifting dynamics in municipal governance.

This thesis adopts an ecological political economy perspective to municipal climate governance to investigate the rise of climate urbanism, and the political and economic context shaping this policy orientation, focusing on the City of Ottawa. The questions guiding this research are:

To what extent do the City of Ottawa's past and contemporary policy orientations reflect sustainable urbanism and climate urbanism? What are the socio-ecological implications of the City's contemporary environmental policies?

To answer these questions, the research focussed on a discourse analysis of seven City of Ottawa historical and contemporary policy documents from the early 1990s to the present. Following an EPE perspective, this thesis seeks to contextualize the City's policies within the political economy of Ontario and Canada from the 1990s onwards, given that Canadian municipalities fall under provincial jurisdiction and are directly and indirectly shaped by federal and provincial policy and reforms. Through two case examples of resident-led advocacy related to the City's environmental policies, supported by interviews with City of Ottawa staff and members of local community organizations, this thesis also explores how federal and provincial funding cuts, reduced social protections, and emphasis on privatization are being resisted by Ottawa residents.

1.2. Intended contributions

Based on an analysis of the City of Ottawa's policy texts and a review of academic literature, this thesis advances three main arguments. The first argument is that the City of Ottawa's policy orientations since the early 1990s have reflected the sustainable urbanism and climate urbanism approaches that Long and Rice (2019) use to describe municipal governance approaches adopted by cities around the world in recent decades. Specifically, this thesis will argue that the City's policy-making from 1990 to the early 2000s used sustainability to rationalize land-use intensification in the downtown core to attract labour and business. Next, it makes the case that the City's contemporary policy-making, from 2010 to the present, continues to promote land-use intensification and introduces new rationales and strategies to advance climate mitigation and adaptation. Selectively drawing on technical and accounting-based approaches of international climate science, the City's contemporary policy-making seeks to secure federal and private

sector funding to implement technological and infrastructure-based solutions to climate change, like building retrofits, electric vehicle infrastructure, and low-emissions zones.

The second argument of this thesis is that the City's environmental governance is influenced by neoliberal economic restructuring at the federal and provincial levels, which reduced funding for municipal infrastructure and local services like social housing. Constrained municipal budgets led the City of Ottawa to seek private sector investment to continue providing important services to residents and to respond to political-economic demands to facilitate increased growth. Increased federal funding for municipal infrastructure beginning in the early 2000s is also linked to municipal climate governance focussed on infrastructure solutions.

The third argument, reflecting an EPE perspective (Jessop, 2012b; Sandler, 1994), is that the City of Ottawa's environmental policies enable the expansion of financial capital. National and provincial governments pass down to municipal governments the responsibilities and consequences of neoliberalization and international obligations towards the environment (While et al., 2010). To reconcile these competing demands, the City's environmental policies create new avenues for capital investment and profit-making by seeking to neutralize the negative socio-ecological consequences of private sector activity, even if these consequences are only temporarily reconciled by being displaced to other individuals, communities, times, and places.

Alongside these arguments, the aim is to make three main contributions relevant to scholarship on EPE, neoliberal cities, and climate urbanism. First, this thesis tests the validity of climate urbanism theory (Long & Rice, 2019) by analysing the extent to which it explains the City of Ottawa's policy orientation. In order for the theory summarized by Long and Rice (2019) to be validated, the City of Ottawa would be expected to have introduced earlier policies based on sustainability, particularly focussing on land-use intensification and the attraction of business

and labour. It would be expected that the City's more recent policies, particularly from the early 2000s onwards, would focus on climate change, especially in regards to managing carbon, improving resilience through technological and infrastructure solutions, and seeking investment with the private sector to fund these initiatives. This thesis identifies how environmental policies change over the long-term, an analysis that involved developing an original coding protocol that analyzes rationales and strategies in a sample of municipal policy documents covering three decades. The second intended contribution of this thesis is to highlight the broader political and economic factors that drive municipal environmental policy-making. These findings shed light on the implications of neoliberalization on municipal finances, and more broadly, on the ability of municipal policy-making to meet ecological and social needs. The thesis problematizes the notion that economic expansion and meeting ecological needs are compatible by demonstrating how decades of municipal policies have accommodated economic growth but have been unable to address its negative social and ecological outcomes. Finally, this thesis highlights some of the ways that Ottawa residents have engaged with and resisted neoliberal governance through environmental policy, as demonstrated by case studies on the redevelopment of the Herongate neighbourhood and the development of an alternative Official Plan for Ottawa, the People's Official Plan. These case studies demonstrate that Ottawa residents envision many different possible futures for Ottawa and they have created promising alternative strategies to resolve environmental and social problems facing the city. Furthermore, this thesis aims to show that grassroots advocacy can successfully influence municipal governance in a neoliberal political and economic context and enact real policy changes to improve the socio-ecological outcomes of municipal environmental policy-making.

1.3. Structure of the thesis

The thesis is composed of six chapters, including this first Chapter, which introduces the research problem and research question guiding this thesis. Chapter Two situates the research problem in the literature by exploring key relevant concepts by reviewing literature in the field of ecological political economy and two other complementary bodies of scholarship, neoliberal cities and climate urbanism. First, this chapter examines how rather than being barriers to economic growth, environmental policies can serve as the boundaries that force capitalism to adapt and ultimately permit continued economic growth in the face of recurring financial and ecological crisis. Next, it discusses insights from the literature on neoliberal cities, particularly how the implementation of neoliberal restructuring at senior levels of government has forced municipalities in many nations to adapt to fiscal cutbacks and the downloading of services by adopting competitive ‘urban entrepreneurialism’ strategies to attract businesses, labour, investment and tourism. Finally, this chapter expands on the concepts of sustainable urbanism and climate urbanism, which draw together the other two bodies of literature by demonstrating how municipal governments are adopting sustainability and climate-related measures in response to neoliberalization and environmental problems, with implications for social inclusion and the protection of urban residents from climate change.

Chapter Three outlines the methodology used to conduct this research. The chapter reviews the thesis’ research objectives and expands on the discourse analysis, historical analysis, interview, and survey approaches taken. It outlines a coding method that was used to analyze six of the City of Ottawa’s policies related to the environment, from 1990 to the present, and the methods used to conduct informational interviews and a survey with City of Ottawa staff and members of local community organizations.

Chapter Four presents the results of the discourse analysis of the City of Ottawa's past and contemporary policies. The chapter reviews academic literature to expand on the Government of Canada's and the Province of Ontario's political economic context during these periods, connecting the province's environmental and economic policy-making to the policies adopted by the City of Ottawa. Furthermore, this chapter presents the results of the discourse analysis undertaken to identify the rationales and strategies present in the City of Ottawa's policy documents related to the environment from the 1990 to the present. Finally, the chapter examines the extent to which Ottawa's policy-making since 1990 reflects sustainable urbanism and climate urbanism, as discussed by Long and Rice (2019). The chapter presents the argument that the City's early policy-making adopted a sustainable urbanism approach in response to federal and provincial neoliberalization and a provincial 'Smart Growth' environmental agenda. It also argues the City's contemporary policy-making has shifted towards climate urbanism, amidst deepening provincial austerity and anti-urban, anti-environmental discourses but also amidst increasing federal infrastructure funding.

Chapter Five discusses the socio-ecological implications of the City of Ottawa's contemporary climate policies and speculates on how gentrification might be exacerbated through policies focussed on achieving GHG emission reductions through land-use intensification, building retrofits, and car-free streets. It then examines two case studies of resident resistance to the City of Ottawa's environmental policies—the Herongate redevelopment project and the People's Official Plan, a grassroots alternative to the City of Ottawa's 2021 Official Plan—to explore alternative environmental solutions and the influence of residents on municipal policy-making.

Finally, Chapter Six provides a summary of the findings, arguments, and contributions of the thesis. In particular, it reviews the case made throughout this thesis that the City's contemporary climate urbanism is due to neoliberalization at the federal and provincial levels of government, in efforts to restructure social conditions in order to accommodate economic growth.

Chapter Two: Literature Review

Over the past few decades, there has been increasing interest in the critical academic literature regarding the role of environmental thought in shaping municipal governance. This thesis draws from, and aims to contribute to, i) the field of ecological political economy (hereafter EPE); ii) literature on the effects of neoliberal economic restructuring on governance at the municipal level; and iii) the emerging critical theory of climate urbanism. To begin, this chapter considers the most recent contributions in the field of ecological political economy, which demonstrate that environmental governance and policy at the municipal level revolves around the need to temporarily resolve recurring economic and environmental crises. Next, the chapter will examine the academic literature on how neoliberal economic restructuring, which transferred responsibilities for infrastructure and social services from higher levels of government 'down' to municipalities, has influenced municipalities' policies related to the economy and the environment in North America. Finally, this chapter explores the emerging critical literature on climate urbanism, which offers an explanation for how neoliberal policies and growing environmental concerns have shaped municipal governance in recent decades.

Specifically, this section examines existing evidence on how neoliberalization has shifted municipal environmental governance from initial emphasis on Smart Growth and sustainability

in past decades (for instance, see Adamo, 2012) towards carbon management, technological solutions, and infrastructure provision more recently. Amidst a challenging fiscal situation, municipalities have capitalized on public demand for environmental action to secure investment and advance economic competitiveness. As a result, municipal environmental policies are not only influenced by federal and provincial neoliberalization but are also an important site for advancing both global environmental commitments and for rolling out privatization and social service cuts. Applying an EPE perspective reveals that environmental problems, rather than posing an existential threat to economic growth, can be harnessed to create conditions that facilitate continued economic growth.

2.1. Ecological political economy

Ecological political economy (EPE) is a body of academic literature that investigates the complex political, economic, and social dynamics that shape ecological-human relations (Quastel, 2016). EPE offers an analytical lens for thinking about state environmental governance and its relation to the economy. From an EPE perspective, political, economic, social, and ecological relations are intertwined and continually shape one another, as the materials of nature flow through the economy and shape political decisions (Katz-Rosene, 2014). The broad and multi-faceted scope of EPE results in “complex refractions of all sorts of struggles” related to the environment and ecology (Harvey, 1996, as cited in While et al., 2004). In an EPE view, the state and the economy are overlapping and interdependent; as economic actors are influenced by state practices and logics, and vice versa (Jessop, 2012a; Quastel, 2016). When analyzing state-level governance, EPE is interested in how a range of actors including states, businesses, unions, and citizens intentionally or unintentionally influence governance (While et al., 2010). An EPE

analysis of the political economic development of state-level environmental governance serves several purposes. First of all, an EPE perspective reveals the interconnections between state interests, economic thought, and ecological implications, which opens up a range of intellectual possibilities. When considering an environmental issue, an EPE analysis might ask: What assumptions are made, what remains unproblematized, and/or how does this contribute to ecological challenges? How does governance impact the environment and transform ecosystems? Are there inequitable social impacts as a result of the governance of a particular issue, and are social and ecological impacts downplayed or normalized (Katz-Rosene et al., 2021)? Asking these kinds of questions can reveal implications of state policies that might otherwise go unscrutinised. Secondly, EPE's critical position allows it to problematize mainstream economic and environmental assumptions, which might otherwise be taken as inevitable or unquestionable. This critical position is useful for interrogating the social implications of political-economic-ecological relations. Finally, EPE is a useful perspective for those with normative concerns about the unjust outcomes stemming from environmental decisions. EPE considers how social organizational structures, institutions, and ideas influence decisions relating to the environment and shape whose interests are served by environmental decisions (Dalby et al., 2012). Decisions about economic production will profoundly shape environmental circumstances, and future political institutions, cultural norms, and economic systems (Dalby et al., 2012). Therefore, understanding how these processes and policies are constructed is important for predicting their future implications. EPE scholars often believe profound systemic change is needed to address environmental crises, rather than policy reforms or new technologies (Quastel, 2016). As a normative perspective, EPE problematizes the status quo and advocates for structural change, and it also has a strategic function. By documenting the complex processes through which

policies and discourses have been shaped, EPE analyses help to pinpoint possible points of intervention to strategically shape governance to be more equitable.

A common argument within EPE challenges the assumption that technological solutions can permanently resolve environmental challenges. This argument relates to the appropriation of nature for continued economic growth, both through the use of raw materials of nature and through a reliance on environmental problems to catalyze growth. The recognition that nature provides the raw materials for the economy stems from Marx's views on the relationship between nature and the economy: "The earth is the reservoir, from whose bowels the use-values are to be torn" (Marx, 1964, as cited in Foster et al., 2010 and Quastel, 2016). Capitalist economies subject nature to 'the rationality of profitability', using nature as the mechanism to create wealth (Foster et al., 2010; Quastel, 2016). As a result, nature's exploitation becomes central to society (Foster et al., 2010; Quastel, 2016). A cycle of extraction and destruction known as the 'Jevons paradox' describes how gains in production efficiency only serve to generate more growth in productivity, which in turn leads to more economic growth (Dalby et al., 2012). Through a 'treadmill of production', material inputs from ecosystems are reinvested into new cycles of production, requiring further ecosystem inputs (Dryzek, 1996, as cited in Dalby et al., 2012; Gould et al., 2004; Schnaiberg et al., 2002). Some EPE scholars refute conventional economic wisdom and the belief that the treadmill of production is fueled solely by consumers and businesses; some EPE scholars predict that political and institutional structures, regulatory regimes, private sector lobbying, private and public investment, cultural norms, and political decisions fundamentally shape this treadmill of production (Dalby et al., 2012). For example, Sandler (1994) argues that a natural 'resource' is a social construct, one that is often constructed through technology—pointing out, as an example, that petroleum had little social

value until technology was developed to exploit it. Capital, labour, and production are not only relations between humans, but also relationships between humans and the rest of nature (Burkett & Foster, 2006; Quastel, 2016). This argument suggests that, while technological innovation can temporarily resolve environmental problems, it can only externalize these problems to other places and times. Technological innovation cannot resolve the root cause of environmental problems, which is social attitudes that consider nature to be exploitable.

A second argument common in EPE analyses relates to the need for capitalist economies to experience crises in order to sustain themselves. Diskin and Sandler (1993) introduce the idea that ecological systems create boundaries that allow for capital accumulation. The pursuit of economic growth as society's top priority, even above social and planetary needs, inevitably leads to environmental or social crisis such as recessions, unemployment, or climate change (Sandler, 1994). However, capitalist economies are adept at constantly internalizing and externalizing "social and natural elements", meaning that real-world conditions are co-opted through policies, regulations, ideas, and practices that create new possibilities for economic growth (Sandler, 1994, p. 45). Environmental policies, for example, serve as a "subversive exterior" to the capitalist economy, as ecological constraints allow capitalism to secure more economic growth (Laclau & Mouffe, 1985, as cited in Sandler, 1994, p. 39). Changing cultural conditions, such as increased concern about the environment in response to growing environmental problems, allows for surplus resources to be re-allocated towards new markets, thereby increasing profits (Sandler, 1994). For example, recycling was initially seen as a burdensome requirement, but it has since come to be seen as a financially valuable industry (Sandler, 1994). Similarly, the growth in the global financial value of carbon markets is evidence of environmental policies shifting towards ecological modernization (Dalby et al., 2012). The

methods through which economies adapt depends on the particular environmental and social regime (Sandler, 1994). In other words, state policy-making creates the conditions that make economic growth possible. Crises like climate change are an important catalyst for influencing state policy, because, as Jessop (2012b, p. 18) explains, crises create social disorientation by disturbing societal discourses, policy orientations, and everyday life, which creates an opportunity for the selective adoption of “imagined recoveries” into economic strategies. Therefore, EPE highlights that the state may temporarily resolve environmental problems to enable continued profit-making, even if it means externalizing problems to other people and places in the present and future.

EPE scholarship suggests that when examining municipal environmental governance, any assumptions about the potential for perpetual economic growth or for technological innovation to resolve problems associated with economic growth should be heavily scrutinized. Furthermore, even though mainstream economics emphasizes ‘free market’ principles, EPE points towards the state as playing a major role in facilitating economic growth by making it socially possible to redirect capital when externalized problems threaten profits. In order to understand how economic growth is facilitated, then, it becomes important to understand how social attitudes are shaped, and where investment is redirected, through state policy-making. The relations that occur between political and economic actors, such as the state, citizens, business, and other groups, is the process that shapes these attitudes and directions.

2.2. Neoliberal cities

Over the past few decades, national and regional governments have reshaped economic policy by reducing public funding for social programs and transferring responsibility for providing

important social infrastructure, especially housing, to the private sector. Cities are a unique place to study neoliberalization because they both implement neoliberal reform and attempt to resolve the social challenges created by reduced public spending and social protections. This thesis draws on scholarly literature on neoliberal cities with the aim of demonstrating how national and provincial governments' reduced funding for social program and infrastructure influenced the City of Ottawa's environmental policies. Namely, this thesis interrogates how funding constraints led to the adoption of 'Smart Growth', intensification, and in more recent years, climate resilience and carbon management strategies in municipal governance. This section examines how state restructuring in the face of declining economic growth influenced North American municipal governance.

From the 1940s to the 1970s, Keynesian economics dominated economic thinking (Palley, 2004). Based on the theories of economist John Maynard Keynes, Keynesian economists generally supported state intervention in the economy through fiscal subsidies and deficit spending to correct any perceived failures in the economic system that would lead to economic downturns (Berry, 2014; Palley, 2004) (see Table 1). The result was fairly robust social services as well as relatively high employment rates (Palley, 2004). In the 1970s, businesses faced price shocks associated with the 1973 oil embargo, declining economic productivity, stagflation, growing wages, increased demands for workers rights, and public concerns about the state of the environment (Palley, 2004; Stanford, 2014). These barriers to profit-making necessitated new economic approaches. The argument was made that optimal economic efficiency would enable continued economic growth and required that the private sector be unencumbered from any government intervention in the form of taxes, regulations, or subsidies (Brenner & Theodore, 2002; Harvey, 2020; Palley, 2004). Neoliberalization was rolled out in the form of free trade

Table 1. Characteristics of Keynesian and neoliberal economic thought (Berry, 2014; Palley, 2004; Patomäki, 2009).

	Keynesian economics	Neoliberal economics
Role of the government in the economy	<ul style="list-style-type: none"> • Governments should manage the economy to achieve high employment. • Government economic management is needed to address inefficiencies within markets. • Fiscal stimulus is beneficial, especially during economic downturns. 	<ul style="list-style-type: none"> • Free markets provide optimal economic efficiency. • Government intervention distorts the efficiency of markets. • Stimulus, if needed, should be through tax cuts.
Distribution of goods and services	<ul style="list-style-type: none"> • Distribution shared through private and public sectors, and co-operatives. • Distributional justice achieved through equal opportunity and social services to benefit the disadvantaged. 	<ul style="list-style-type: none"> • Distribution determined by private sector. • Distributional justice achieved through free markets and limited social services to encourage self-sufficiency.

agreements and reduced government spending for social programs at national and regional levels of government, which later created financial challenges for municipalities (Brenner & Theodore, 2002; Fanelli, 2014; Palley, 2004; Stanford, 2014) (see Table 2).

The state plays an active role in restructuring regulations and state-economy relations to facilitate economic markets (Brenner & Theodore, 2005). Rather than being an ideology that can be replicated anywhere, ‘actually existing neoliberalism’ is a process of political and economic change influenced by historical frameworks of policies, regulations, and politics that are unique to specific places but interact across scales (Brenner & Theodore, 2002). This process began in the 1970s with the development of a neoliberal philosophy and economic framework (Tickell &

Peck, 2003). States began to implement neoliberal policies in the 1980s, in an era that Tickell and Peck (2003) term ‘rollback neoliberalism’, characterized by trade liberalization at the global scale and cuts to social services, privatization, and de-unionization at the local scale. The early 1990s began a period of ‘rollout neoliberalism’ which locally emphasized rapid policy-making,

Table 2. Key moments in the neoliberalization of Canada and Ontario (Palley, 2004; Stanford, 2014).

Decade	Federal and provincial policy
1980s	<ul style="list-style-type: none"> • Reduced income and corporate tax rates • Bank of Canada increases interest rates • North American Free Trade Agreement (NAFTA) implemented
1990s	<ul style="list-style-type: none"> • Reduced federal and provincial spending on social assistance, healthcare, and education • Housing rent controls eliminated • Municipal amalgamations
2000s	<ul style="list-style-type: none"> • Increased federal infrastructure spending • Reduced provincial spending on social services following 2008 recession

permanently adaptable urban governance, and the expansion of market-oriented regulations (Tickell & Peck, 2003). From an analytical standpoint, treating neoliberalization as a process facilitates the tracking of the transformations that have occurred over the past few decades and the economic and social outcomes of these transformations (Adamo, 2012; Brenner & Theodore, 2002).

In Canada, the government of Brian Mulroney adopted policies to globalize and deregulate economic markets in the late 1980s and early 1990s, such as through the passing of the North American Free Trade Agreement, which contributed to divestment from Canadian manufacturing and decreasing Canadian wages (Champagne, 2020; Stanford, 2014). In Ontario, the government of Mike Harris implemented a government agenda known as the ‘Common Sense Revolution’,

which significantly reduced the province's public welfare spending increase private sector and market activity (Keil, 2002). It also amalgamated dozens of Ontario municipalities (Andrew & Doloreux, 2012), including eleven municipalities in the Ottawa area to create the present-day City of Ottawa (Leffers, 2015). Though intended to reduce costs for the provincial government, amalgamations were implemented alongside policies to curtail municipalities' powers to generate revenue through taxes which exacerbated municipal fiscal challenges (Keil, 2002). Following the 2008 global financial crisis, the provincial government deepened austerity policies with even further cuts to remaining social funding (Peck, 2012). Reduced funding for social services and infrastructure has led to the deterioration of municipal infrastructure, which has not yet been remedied despite increasing federal infrastructure funding since the early 2000s (Fanelli, 2014). For example, as of 2020, Ottawa's infrastructure backlog is \$4.9 billion, and only 39 per cent its infrastructure is in a state of good repair, as a percentage of its current replacement value (Financial Accountability Office of Ontario, 2021). Municipalities have had to adopt new strategies to cope in the face of fiscal pressures associated with reduced funding for social services that urban residents depend on. Their limited municipal taxation and regulatory powers have led municipal governments to seek cost-savings through privatization of municipal services and infrastructure, and to generate revenue through consumption-based taxes and user fees, even though these approaches have often been associated with poorer quality and costlier services (Fanelli, 2014).

Cities are increasingly in competition with one another to attract the private investment and tax-generating population growth needed to balance municipal budgets. Since the late 1980s, North American and European municipalities have shifted towards 'urban entrepreneurialism', adopting strategies intended to improve cities' competitiveness when it comes to their ability to

attract infrastructure investment and economic activity (Harvey, 1989). These strategies often depend on creating venues for financial speculation and capital, in addition to simply meeting the needs of local residents (Harvey, 1989). For example, Keil (2002) argues that an urban entrepreneurialism approach led Toronto to become a global city where capital and people could flow easily throughout the region, such as through its continued urban sprawl. At the same time, Toronto experienced a decline in the social service sector, fewer planning restrictions, reduced public housing programs, and weakened environmental regulations (Keil, 2002).

Cities are unique sites for studying the impacts of neoliberal economic governance because municipal governments are accountable to senior levels of government and are also tasked with meeting the needs of urban residents (Peck, 2012). As a result, municipal governments are squeezed from both directions, and as higher levels of government pass down to municipal governments the challenges associated with reduced social funding, municipalities sometimes pass on these challenges to equity-deserving neighbourhoods and individuals (Peck, 2012). For instance, in recent years, the City of Ottawa's share of total spending on social services and public housing has declined, while share of spending on healthcare and recreation has remained stable, and for police services has increased (Pomeroy & Marquis-Bissonnette, 2016). At the same time, the 2016 census found that 12 per cent of Ottawa-Gatineau residents lived in unsuitable or inadequate housing due to poverty (Statistics Canada, 2017). Amidst reduced public spending by federal and provincial governments, Canadian municipal governments have been both 'riding the wave' of neoliberalization, adopting market-based strategies to continue providing public services, and 'hollowing out' their service provisions, cutting back social programs (Champagne, 2020).

Rather than being a “static social form” (Thomas & Tufts, 2016, p. 214), neoliberalization is a process embedded in institutions, policy frameworks, and regulations that shapes economies, politics, and everyday lives (Brenner & Theodore, 2002). Policies promoting private sector profit-making, reduced public spending, and fewer regulations on business have only temporarily resolved financial and social problems by displacing them into the future (Brenner & Theodore, 2002; Walks & Soederberg, 2021). As demonstrated by growing austerity following the 2008 recession, neoliberalization can be continually adapted to overcome economic instability and social problems (Brenner & Theodore, 2005). Neoliberal urbanization has often been enabled by the displacement of equity-deserving communities for the purpose of redevelopment (Harvey, 2008). Lefebvre (1968) introduced the idea of the ‘right to the city’, an idea later expanded by Harvey (2008), describing a collective right to determine urban lifestyles, social relationships, technologies, and relationships to nature. Neoliberal urban development provides an illusion of freedom of choice by creating an abundance of opportunities for consumerism in the form of shopping malls, restaurants, and luxury housing (Harvey, 2008). In neoliberal cities, environmental responsibility is restricted to individual ‘conscious consumerism’, accessible to residents who can afford eco-friendly lifestyles. The right to determine urban responses to environmental problems is limited to private investors and municipal governments. Yet, cities are the outcomes of social struggles for control of space Brenner (2019) and a site for social resistance to neoliberalization (Harvey, 2008). Tracking continual neoliberal transformations as a process is useful for understanding its impacts on cities, speculating on externalized outcomes, and documenting social resistance to neoliberalization.

2.3. Climate urbanism

An emerging body of critical scholarship on climate urbanism examines the intersections between neoliberal restructuring and environmental governance at the municipal level. Long and Rice (2019) highlighted how early municipal environmental policies, which focussed on sustainable development, Smart Growth, and intensification, are now being articulated alongside carbon management, climate resilience, and technological and infrastructure solutions to climate change. In the 1990s and early 2000s, municipal policy-making emphasized creating dense, compact neighbourhoods and eco-friendly housing (Long & Rice, 2019) (see Table 3). This sustainable urbanism approach aimed to address environmental issues, capitalize on growing public concern about the environment, and create desirable neighbourhoods in order to attract business and labour to advance economic growth (Long & Rice, 2019). By selectively incorporating environmental goals into public policy, municipalities aimed to balance response to environmental pressures, such as congestion, public concern, and regulatory requirements, with economic demands, such as budgetary limits, consumption demand, and business interests (While et al., 2004). This balancing act represented an ‘urban sustainability fix’, an institutional solution intended to safeguard private capital amidst declining economic growth rates and environmental crisis (While et al., 2004). Sustainable urbanism aimed to reduce the GHG emissions, air pollution, and ecological destruction associated with sprawling development by intensifying land-use, while managing fiscal challenges and responding to private sector demands by facilitating business, labour force growth, and investment.

Since the early 2000s, municipal governments have expanded on sustainable urbanism and increased their focus on climate change response. While municipalities have continued to advance the intensification and sustainability policies of previous decades, they have also begun

Table 3. Elements of sustainable urbanism and climate urbanism (Long & Rice, 2019).

	Sustainable urbanism	Climate urbanism
Rationale	Local environmental improvements attract desirable industries and workers, a win-win for the environment and the economy.	Cities are key to global economic growth, so they should be protected from the impacts of climate change. Cities are capable of leading climate action.
Goals	To improve the environment and create economic growth simultaneously.	To protect urban capital and infrastructures from the threat of climate change.
Concerns	Environmental issues (e.g. biodiversity, urban sprawl), economic growth	Climate hazards, social conflicts, economic uncertainty, competitiveness
Focus	Sustainable development	Carbon management
Rhetorical features	Sustainability	Adaptation, mitigation, climate friendliness, and climate resilience
Key actors	Workers (professionals), businesses (e.g. property developers)	Citizens, corporations (e.g. technology companies), investment partners, financial institutions
Solutions	Livable neighbourhoods, intensification, Smart Growth, Smart Cities (e.g. digital infrastructure)	Technological and material solutions (e.g. green infrastructure), new institutions and governance frameworks
Social justice	Sustainability policies emphasize social development, but in practice, sustainability initiatives sometimes cause displacement and exclusion.	Social justice issues are trivial in light of the threat of climate change. Displacement and marginalization are normalized as a reality of the climate crisis.

to implement policies specifically intended to mitigate GHG emissions, adapt to a changing climate, and become resilient to climate-related hazards (Long & Rice, 2019) (see Table 3). The early 2000s experienced two simultaneous crises: the 2008 financial crash and subsequent global recession, and growing impacts from climate change (Long & Rice, 2019). In 2005-2006, climate change shifted from being a major concern to being an outright crisis in the minds of the public, due to record temperatures, rainfalls, heat waves, droughts, and floods around the world (Vidal, 2006). Through a process of ‘eco-state restructuring’, in which governments seek to reorganize regulations and institutions to be less ecologically-damaging (While et al., 2010), governments have come to target fossil fuel dependence as society’s main ecological problem to be solved (While et al., 2010). Eco-state restructuring towards GHG management has led to a climate urbanism approach which draws on concepts like ‘carbon neutrality’, ‘carbon markets’, and ‘carbon footprints’ to mobilize a low-carbon political economy (Jonas et al., 2011). In this new municipal governance era of climate urbanism, municipal policy-making focuses on managing GHG emissions through managerial accounting and budgeting, and on protecting critical economic and physical infrastructures through technological and built solutions like low-carbon construction, low-emissions zones, flood-resilient infrastructure, and circular economies (Long & Rice, 2019; Westman & Castán Broto, 2020). Amidst ongoing fiscal constraints on municipal budgets, municipalities tend to seek private sector investment and grants from higher levels of government to implement these projects (Long & Rice, 2019). A rearticulation of the urban sustainability fix (While et al., 2004), climate urbanism intensifies urban entrepreneurialism as cities compete to win government funding as well win over global investors looking for safe investments or speculating on places that might become future safe-havens for climate migrants (Shi, 2020). Climate urbanism seeks to portray cities as global

economic engines and climate leaders, capable of protecting capital investment from climate-related impacts, and therefore reconfigures municipal policies to enable economic growth (Long & Rice, 2019).

Despite the fact sustainable development conceptually assigns equal weight to social, environmental, and economic sustainability (Bunce, 2009), municipal sustainability policies in Canada, the United States, and around the world have consistently failed to consider social justice (Bulkeley et al., 2013; Champagne, 2020; Pearsall & Pierce, 2010; Tozer, 2018; Warner, 2002). In practice, urban sustainability policies have constituted state-led environmental gentrification in areas targeted by the policies, resulting in the displacement of residents (Bunce, 2009; Checker, 2011; Goossens et al., 2020; Kern, 2015; Long & Rice, 2019; Pearsall, 2018; Quastel et al., 2012). The concept of state-led environmental gentrification is drawn from theoretical work on policy-led gentrification (Hackworth & Smith, 2001) and environmental gentrification (e.g. Bunce, 2009b; Checker, 2011; Dooling, 2009). Hackworth and Smith (2001) identified a form of gentrification initiated by municipal governments' policies to attract private sector developers to redevelop urban areas, resulting in higher housing costs in those neighbourhoods and an influx of wealthier residents. Environmental gentrification is a kind of policy-led gentrification in which municipal policies and projects displace and exclude vulnerable communities and individuals under the guise of an environmental agenda. Municipal governments might co-opt the political and discursive success of local environmental justice activists to rationalize environmental policies that then displaces these same residents (Checker, 2011). Environmental gentrification can also occur through classist and racist exclusion of long-time residents as the demographics of neighbourhoods change (Anguelovski, Connolly, Pearsall, et al., 2019; Kern, 2015). People and communities vulnerable to environmental gentrification are

those with low incomes and those discriminated against on the basis of ethnicity and class (Anguelovski, Connolly, Pearsall, et al., 2019). Long-term residents have been priced out (Checker, 2011; Quastel, 2009) and/or socially excluded (Checker, 2011; Goossens et al., 2020; Kern, 2015) when neighbourhoods receive environmental upgrades such as green buildings, improved streets, greenspace, and waterfront access (Bunce, 2009; Pearsall, 2018). Urban sustainability policy has also been found to exacerbate local participatory injustices, such as when City officials capitalize on residents' environmental activism to advance sustainability policies that risk displacing those same residents (Checker, 2011). Furthermore, at the same time as sustainability policies lead to gentrification in downtown and other selected neighbourhoods, they can fail to address poverty in the "city-in-between" the urban neighbourhoods and wealthy exurban areas (Keil, 2009, p. 74). Adamo (2012) found that the City of Ottawa's intensification policies, justified through the lens of sustainability in the City's 2003 Official Plan, exacerbated rising housing costs in Ottawa by driving high-end, market-based densification in Ottawa's downtown core. In an effort to attract more residential and commercial development to the city centre in the midst of provincial neoliberalization, the City implemented a 'growth-first' approach to intensification, with a lack of enforceable policies to ensure that new developments would include affordable housing units for low- and middle-income residents (Adamo, 2012). Sustainability and liveability discourses allowed the City of Ottawa to package and promote intensification policies to a public that was concerned about the environment, but tended to be opposed to development (Adamo, 2012). Echoing this argument, Leffers and Ballamingie (2013) found that through mechanisms like the 2003 Official Plan and associated zoning bylaws, the City of Ottawa developed a discourse of "'sustainable' management" (p. 139) to justify residential intensification and private development. Although the City presented its

intensification policies as a sustainability measure, staff and City Council interviews conducted by Zeemering (2016) reveal that sustainability goals were not always prioritized in the City's land-use planning. According to City civil servants, Ottawa's City Council prioritized economic interests above sustainability, and City staff lacked the resources to thoroughly develop the City's sustainability policies (Zeemering, 2016). Leffers and Ballamingie (2013) determine that the main motive behind the City's intensification policies was to generate revenue through a larger tax base, as the Province of Ontario amalgamated municipalities and transferred more responsibilities to municipal governments under neoliberal rationales in the 1990s. Given that sustainability policies in Ottawa and North American cities have been developed to increase investment and revenue in response to neoliberal restructuring, these policies have tended to neglect affordability and social inclusion. The era of climate urbanism may exacerbate these social problems by advancing gentrification and neglecting the interests of vulnerable residents.

Though social considerations were implicit, if under-realized, in sustainable urbanism, climate urbanism is anticipated to further legitimize the lack of attention to social issues. Rather than the nod to social development in sustainable urbanism through concepts like quality-of-life and liveability, climate urbanism reframes the social importance of climate action in terms of an imperative for human survival, emphasizing that resources should be dedicated towards securing critical infrastructure (Long & Rice, 2019). Speculating on the social outcomes of climate urbanism, Long and Rice (2019) predict that climate protection will be distributed disproportionately to an urban elite and the urban/suburban poor will be neglected (Long & Rice, 2019). Already, equity-deserving communities and individuals are at greater risk of climate impacts, despite having contributed less to climate change (Anguelovski, Connolly, Pearsall, et al., 2019). Some residents have already experienced 'climate gentrification', in which climate-

resilient infrastructure increases local housing prices and exacerbates social exclusion (Anguelovski, Connolly, Pearsall, et al., 2019). Furthermore, an intense focus on carbon management could stigmatize residents seen as ‘more carbon polluting’ depending on their jobs or where they live; for example, those who live or work in industrial areas as opposed to those who live or work in service sector areas (Jonas et al., 2011). This division between citizens could lead to increased regulatory or disciplinary measures against poor citizens, given that they have fewer resources and opportunities to adopt climate-friendly technologies, lifestyles, and behaviours (Long & Rice, 2019). Remaining silent on social justice issues, climate urbanism normalizes the idea of a ‘climate apocalypse’ world in which marginalization and displacement are inevitable (Long & Rice, 2019).

Climate urbanism sheds light on the puzzle posed by Tozer (2018): why do municipal plans contain both sustainable development and climate change narratives, if sustainable development should be an effective response to climate change? As highlighted by climate urbanism theory, municipal environmental policies adopt a variety of strategies to achieve a balance between shifting economic and environmental pressures. This thesis aims to contribute to the emerging body of scholarship on climate urbanism by testing whether this policy orientation characterizes the City of Ottawa’s governance strategies, and if so, by documenting the political and economic factors that influenced its adoption, and how residents are resisting this transition.

2.4. Chapter conclusion

This chapter situated the thesis within the literatures of ecological political economy, neoliberalism, and climate urbanism. Cities are important sites to study the impacts of

neoliberalization, as its inherent contradictions and problems are downloaded from higher levels of governments to municipal governments. Austerity is the latest iteration of neoliberalism in response to economic crisis, coinciding with increasing concerns about climate change among municipal governments. An EPE perspective reveals how municipal environmental policies, in an era of neoliberal austerity, create new avenues for profit-making that bolster municipal revenues and advance economic growth.

Chapter Three: Methodology

The broad question guiding this master's thesis is whether, and to what extent, features of sustainable urbanism and climate urbanism policy orientations describe the City of Ottawa's public policies from the early 1990s to the present. Drawing on a growing body of critical scholarship on sustainable urbanism and climate urbanism (Long & Rice, 2019; McKendry, 2020; Robin & Broto, 2021), as well as perspectives from ecological political economy and urban neoliberalism, this thesis aims to depict how federal and provincial economic and environmental policies were filtered down and strategically adopted, institutionalized, and contested within municipal policy-making in Ottawa. This research involved a multimethod approach consisting of discourse analysis of municipal policy documents, historical research based on scholarly literature, and interviews and a survey with City staff and members of local community organizations. This thesis adopts an EPE perspective to examine how political and economic forces at local, provincial, and federal scales have interacted and influenced local environmental policies. EPE differs from political ecology, a discipline that emerged from anthropology and that studies how conflicts and power relations between social actors influence environmental and social outcomes (Roberts, 2020). The intended benefit of using an EPE perspective is to speculate on future political and economic trends, and their ecological and social outcomes, in order to inform local environmental policy-making and advocacy.

3.1. Discourse analysis

This research centred on a discourse analysis of City of Ottawa policy documents related to the environment that were published from 1990 to the present. It was necessary to use a research method that examined multiple elements of policy texts, given the complexity and subjectivity of

environmental thinking (Harvey, 1996). The discourse analysis identified dozens of rationales and strategies on environmental issues and response within the City’s policy documents, which were then compared for similarities and differences with the sustainable and climate urbanisms described by Long and Rice (2019). The policy documents were publicly available, either online or at the public library. Six documents were included in the study (Table 4). The documents were selected based on their relevance to environmental policy and their date of publication. The time periods of interest for this research were 1990 to the early 2000s and 2010 to present, which reflect the periods in which sustainable and climate urbanisms were predominant, respectively, in municipal governance (Long & Rice, 2019). From the 1990s to early 2000s, the policy documents examined were the City’s 1991 and 2003 Official Plans (City of Ottawa, 1991, 2003).

Table 4. Policy documents included in this study.

Period	Documents examined
1990 to early 2000s	<ul style="list-style-type: none"> • The City of Ottawa’s Official Plan (1991) • The City of Ottawa’s Official Plan (2003)
2010 to present	<ul style="list-style-type: none"> • A Plan for Sustainability and Resilience in Canada’s Capital Region (2012) • Climate Change Master Plan (2020) • Energy Evolution: Ottawa’s Community Energy Transition Strategy (2020) • The City of Ottawa’s Official Plan (2021)

Official Plans are land-use plans legally required by the Province of Ontario, and in this earlier period, were the City’s main documents related to environmental policies. From 2010 to present, four policy documents were studied. These were the 2021 Official Plan (City of Ottawa, 2021a)

and several policies specifically about the environment: the Climate Change Master Plan (City of Ottawa, 2020b), which contains high-level climate objectives as well as emission reduction targets; Energy Evolution: Ottawa’s Community Energy Transition Strategy (City of Ottawa, 2020a), which outlines specific actions to operationalize the City’s climate objectives; and the Plan for Sustainability and Resilience in Canada’s Capital Region (City of Ottawa et al., 2012), which outlines a broad vision of environmental management, developed by the City of Ottawa, the City of Gatineau, and the National Capital Commission, for the Ottawa-Gatineau region.

The discourse analysis was conducted using a coding protocol that documented rationales and strategies within the policy texts, line-by-line. A rationale was any sentence or paragraph that explained why the City needed to take action on any issue. A strategy was any sentence or paragraph that proposed an action for either the City or any other actor to take. The documents were coded in NVivo data analysis software. Then, the rationales and strategies were compiled into one list for each of the time periods, and then were grouped into themes based on commonality of the codes. For example, the statement “[w]e will need to find new ways to ensure we can weather crises—be they health, environmental or economic” in the 2021 Official Plan (City of Ottawa, 2021a, pg. 2) and the statement “[a]n increasingly interdependent world has created greater vulnerability to unforeseen events that have the potential to create significant consequences at home. . .” in A Plan for Sustainability and Resilience in Canada’s Capital Region (City of Ottawa, City of Gatineau, & National Capital Commission, 2012, p. 18) were both coded as rationales and grouped under a theme of ‘Ottawa faces an increasingly uncertain future’. The themes are presented in Tables 5-8. The themes characterize the City’s policy orientations and facilitate a comparison to sustainable and climate urbanisms, as outlined in Table 3.

3.2. Historical analysis

To situate the City's policy-making within a broader political-economic context, this research undertook historical analysis to understand the political economies of Canada and Ontario from the late 1980s to present. The historical analysis involved reviewing approximately a dozen scholarly articles and books covering the period since the late 1990s, collected through a database search using keywords related to Ontario, federal, and municipal ecological political economy. It sought to answer the following questions: i) what were the main environmental policies adopted by the governments of Canada and Ontario during this period? ii) what major political and economic events occurred? and iii) how did these policies and events affect municipal governments in Ontario? During the review, major political and economic events, as well as major environmental policy developments, were noted and compiled into a chronological narrative summary. The historical analysis facilitated making connection between the City's policies and a broader political-economic context and supported a comprehensive response to this thesis' broader research objectives.

3.3. Interviews and survey

In addition to discourse analysis and historical analysis, this research involved semi-structured participant interviews and a research survey with one participant. The research was approved by the University of Ottawa Office of Research and Integrity (Appendix A). The interviews and survey complemented the discourse analysis with insight on environmental policies from those deeply involved in it. In total, this research involved five participants. Two interviews were conducted with City staff involved in environmental policy from the City's planning division and climate change and resiliency division, and two interviews were conducted with representatives

from local community organizations who had leading roles within the People's Official Plan coalition. One City staff member, at their request, received the interview questions in survey format and provided written responses in lieu of a verbal interview. Staff at one local organization, ACORN Ottawa, declined to be interviewed, and instead provided web links to press releases outlining the organization's positions on topics relevant to the research.

Participants received a consent letter explaining the research and describing the efforts made to protect participants' anonymity and confidentiality. Interviews were made via video call and lasted approximately 20 minutes. A snowball sampling method was followed during interviews with City staff, by contacting City staff in the Climate Change and Resiliency department and the Policy Plannings and undertaking interviews with City staff based on suggestions from interview participants. Staff interview questions broadly sought to uncover why and how the City's policies adopted specific environmental concepts, like sustainability and resilience, as rationales, and how these concepts are being applied in specific projects (Appendix B). This small sample of participant interviews was intended to complement the discourse analysis of City policy documents by uncovering some of the 'unofficial' thinking and strategies about the environment which might not be included in 'official' policy documents.

The interviews also informed the analysis of two case studies, the redevelopment of the Herongate neighbourhood of Ottawa and the development of the People's Official Plan, to examine the impacts and contestation of local environmental policy. These case studies were selected because they were highly-publicized examples of contesting 'official' policy-making in Ottawa. Examination of the case studies also involved reviewing media articles and online documents published by ACORN Ottawa and the People's Official Plan group, in addition to interviews with members of the latter. Interviews with members of these groups were sought by

identifying individuals, through organizational press releases and media articles, who had been involved extensively in the groups' work. Interviews with community group representatives aimed to shed light on the issues being contested, the alternative solutions proposed, how groups engaged with the City, and how the City responded to proposed solutions groups' proposals.

3.4. Limitations

This research focusses mainly on municipal government, which is only one of many different actors contributing to environmental response at the local level, including residents, Indigenous Nations, community organizations, businesses, and institutions. Understanding municipal climate policy is fundamentally a political undertaking, influenced by our own perspectives, knowledge, and interests (Robin et al., 2020). This thesis does not do justice to many important perspectives, such as Indigenous knowledges and methodologies, postcolonial and decolonial thought, feminist theories, rural studies, environmental justice, and infinite other valuable knowledges. This thesis suggests that focussing on municipal government is nonetheless useful, given international interest in urban climate response, the role of local states in structuring environmental and economy policy, and the impact of municipal policy on residents' everyday lives. At the same time, this research aims to include perspectives and actions from other climate actors, including residents, community groups, politicians, and other levels of government throughout the text. It seeks to problematize mainstream environmental policy and emphasize that there are many possible environmental futures in order to encourage consideration of multiple perspectives.

The focus on municipal policy documents in this research represents the 'official' discourses present in the City of Ottawa's policy-making. 'Official' discourses are useful in

demonstrating rationales and strategies that are politically and publicly acceptable, but likely exclude the full range of ideas, assumptions, and strategies behind the policy-making process. Additional interviews with City staff and representatives from local advocacy groups explore some of the ‘unofficial’ thinking behind City policies and projects. One local advocacy group, ACORN Ottawa, declined to be interviewed, and given that ACORN Ottawa represents low- and middle-income tenants from socially and culturally diverse backgrounds, the views of these residents were underrepresented in the interview process and results. Extensive documentation on ACORN Ottawa’s website, including press releases, presentations, and summaries of news articles, substituted the interview process in order to include the organization’s views in the research. Overall, the methodology facilitated a comprehensive analysis of the discursive components of the City’s environmental policies and the political economic context influencing these discourses.

Chapter Four: Climate Change and Sustainability in the City of Ottawa's Plans

This chapter examines the City of Ottawa's environmental policy from 1990 to the present to understand how they are being influenced by economic restructuring at the federal and provincial levels of government. After first presenting the results of the discourse analysis and historical research methods described in Chapter Three, this chapter forms the argument that the City is adopting a climate urbanism policy orientation after several decades of sustainable urbanism. This chapter begins by examining an earlier period of municipal environmental policy, from 1990 to the early 2000s, discussing scholarly literature on federal and provincial neoliberalization that led to reduced social spending and the rise of provincial 'Smart Growth' environmental strategies. The results of the discourse analysis are then presented for two early Official Plans—the City's 1991 and 2003 Official Plans—which reveal that the City of Ottawa's policy-making in the 1990s and early 2000s drew on sustainability narratives to harness population growth, grow the labour force and employment, and respond to environmental challenges. Next, the chapter summarizes scholarly literature covering 2010 onwards to depict reduced social spending and anti-urban discourses by the Province of Ontario alongside increasing federal infrastructure funding during this period. Then, the chapter presents the results of the discourse analysis for four of the City's contemporary policy documents—the 2021 Official Plan, the 2020 Climate Change Master Plan, and the 2020 Energy Evolution strategy—as well as one plan developed in a partnership between the City of Ottawa, the City of Gatineau, and the National Capital Commission—the 2012 Plan for Sustainability and Resilience in Canada's Capital Region. The results indicate the City is continuing to advance land-use intensification policies and is also introducing new policies focussed on mitigation, adaptation, and resilience, selectively drawing on elements of international climate science to justify a new

climate-focused approach. In conclusion, a summary is provided on how sustainable and climate urbanisms, as described by Long and Rice (2019), accurately characterize the City of Ottawa's approach to environmental policy. Results from participant interviews are drawn on to explain the shift from sustainable and climate urbanism from the perspective of City staff, who shed light on the practical importance of environmental narratives when it comes to implementing the City's environmental policies. On a broader level, within this chapter it is argued, following an EPE perspective, that the City seeks to reconcile national and provincial environmental commitments and economic policies and ideologies by selectively applying environmental narratives in ways that enable economic growth.

4.1. Federal-provincial neoliberalization and 'Smart Growth' land-use planning (1990 to early 2000s)

Neoliberalization at the federal and provincial levels of government resulted in shifting the responsibilities for funding infrastructure and local services to municipal governments. Beginning in the 1920s, the federal government invested in social housing programs and other municipal infrastructures, like sewage and wastewater improvements (Bojorquez et al., 2009). However, in the 1980s, the federal government greatly reduced financial support to municipalities, eliminating funding to build new affordable housing, and reducing funding to housing programs by \$2 billion in the 1980s (Shapcott 2006). In the 1980s, the federal government implemented no new federal-municipal transfer programs, wishing to reduce federal involvement in what was considered to be provincial jurisdiction. By the mid 1990s, the federal government transferred its federal responsibilities for housing to provinces and territories and allowed investment firms to access the real estate market (Bojorquez et al., 2009). In 1997, the

Province of Ontario eliminated rent controls and also facilitated investor involvement in rental housing (Crosby, 2020). These changes represent a global trend since the 1980s in the financialization of housing, which included increasingly viewing multi-family rental housing as a long-term investment strategy (Crosby, 2020). Crosby (2020) connects this financialization of rental housing with gentrification and displacement because financialization incentivizes profit-making by evicting lower-income, often racialized tenants in order to rent out the units at higher prices to usually higher-income, racially-privileged tenants. Although the federal government had effectively ended its targeted support for social housing programs, in the 1990s it implemented new programs supporting municipal infrastructure with joint contributions from the federal and provinces, and these federal investments were increased in the early 2000s (Bojorquez et al., 2009). In the early 2000s, the federal government sought to address growing concerns about the financial and infrastructure challenges facing municipalities by launching a number of infrastructure programs, like the \$2 billion Infrastructure Canada Program, the Green Municipal Fund, and the Gas Tax Fund, which reallocated a portion of federal revenue on gasoline taxes to municipalities' public transit on the basis of ridership (Fanelli, 2014). This increased federal funding was welcomed by municipalities, but nevertheless was insufficient to address decades of infrastructure neglect (Fanelli, 2014). Despite funding declines, provincial and federal grants were important sources of revenue for municipalities in the 1990s and early 2000s, but property tax revenue and user fees were municipalities' largest sources of revenue (Bojorquez et al., 2009).

In an examination of the province of Ontario's ecological political economy, Winfield (2012) outlines how growing environmental awareness and federal and provincial neoliberalization influenced Ontario's environmental policies. In the late 1980s, the provincial

government of Bob Rae responded to high levels of environmental concern among voters by proposing ambitious environmental policies, including an environmental bill of rights, the introduction of a land speculation tax intended to protect farmland, and proposed bans on the discharge of toxic chemicals (Winfield, 2012). Yet, due to economic recession in the early 1990s, economic concerns began to overshadow environmental concerns, and the implementation of environmental initiatives was deprioritized (Winfield, 2012). However, growing concerns about suburban sprawl and its environmental impacts in Ontario resulted in major changes in the province's land-use planning system and an overhaul of the Planning Act in 1994, as Winfield (2012) explains. These changes would have a major influence for municipal governance and planning. The Planning Act draws directly from the language of the Brundtland report, with a stated purpose of advancing sustainable development in Ontario to achieve economic, environmental, cultural, physical, and social wellbeing and to protect and conserve Ontario's natural environment for present and future generations (Winfield, 2012; Planning Act, 1990; World Commission on Sustainable Development, 1987). In practice, the Act emphasizes 'Smart Growth' planning principles: limiting urban sprawl; protecting agricultural land and natural heritage from urban development; promoting compact, mixed-use urban development; and increasing active transportation and public transit use (Winfield, 2012). Prior to these amendments to the Planning Act, municipalities and other planning authorities had no obligation to comply with provincial policies; with the revised Act, municipalities now had to ensure their policies were consistent with provincial policy (Winfield, 2012). As a result, municipal governments were obligated to adopt land-use planning consistent with 'Smart Growth' principles and "sustainable economic development" (Planning Act, 1990). This emphasis on economic development and sustainability, and the need to boost municipal budgets by increasing

revenues, is reflected in the rationales and strategies of the City of Ottawa's earlier Official Plans.

4.2. Sustainability policy in Ottawa (1990 to the early 2000s)

In the 1990s and early 2000s, the City of Ottawa emphasized economic growth and environmental improvement as compatible and mutually-reinforcing elements of public policy. As revealed by discourse analysis of the 1991 and 2003 Official Plans, the City's policies during this period were rationalized by a 'sustainable development' approach that drew on concepts of the Brundtland report (World Commission on Sustainable Development, 1987). These policies sought to improve the environment to attract labour and employment, making Ottawa more liveable while achieving a 'balance' between ecological and societal needs. The primary strategy to implement sustainable development was land-use intensification, which sought to concentrate employment and population growth in existing built-up areas and alongside transportation corridors. Land-use intensification would support a number of other sustainability strategies, like sustainable transportation, improved greenspace, more local food production, and reduced pollution and GHG emissions. This section discusses the rationales and discourses that were identified in the 1991 and 2003 Official Plans, depicting how environmental improvement was portrayed as a solution to the demographic, environmental, and economic challenges facing Ottawa in this period.

4.2.1. Rationales: Employment, liveability, and the environment

As evidenced by the rationales in the 1991 and 2003 Official Plans, environmental problems, changing population structure, managing employment growth, adapting to changing economic

trends, and public health were key issues in the 1990s and early 2000s (Table 5). In the 1980s, environmental awareness and appreciation had become one of the major issues in Canada (City of Ottawa, 1991, Chapter 1, p. 4). During public engagement on the 1991 Official Plan, the citizens of Ottawa expressed a strong desire to improve the quality of the local environment (City of Ottawa, 1991, Chapter 1, p. 4). The 1991 Plan takes a socio-ecological approach that acknowledges of the “intrinsic value of the environment” (City of Ottawa, 1991, Chapter 1, p. 15). With a mission statement of ‘environmentally sustainable urban development’, the objective of the 1991 Plan is to manage urban change while “preserving a lasting habitat for humanity and wildlife”, managing a “sound and balanced fiscal framework”, and conserving the finite “natural resource base” that is needed to sustain “an economic and social quality of life” and the health of residents (City of Ottawa, 1991, cover page). These were idealistic goals, and in reality, Ottawa was undergoing urban changes due to shifting population demographics, particularly an aging population, low fertility rates, and population growth that was expected to occur disproportionately in the outer suburbs (City of Ottawa, 1991, Chapter 1, pp. 4-8). There was concern that these population changes could lead to labour shortages in Ottawa’s central areas, where employment was traditionally concentrated and where employment was projected to continue growing (City of Ottawa, 1991, Chapter 1, p. 7). In fact, it was expected that Ottawa’s downtown would have more employees than residents by 2011 (City of Ottawa, 1991, Chapter 1, p. 7). Sustainable development was expected to bring workers to the city, through a number of attractive benefits: improved social conditions (such as better public health and quality-of-life; a strong regional identity; and open, informed decision-making), a healthier environment (eco-friendly housing options; increased walking, cycling, and public transit opportunities; sustainable and affordable local food; healthy ecosystems and biodiversity; walking, cycling, and public

Table 5. Policy rationales, 1990 to early 2000s.

Rationales	Official Plan (1991)	Official Plan (2003)
Through sustainable urban development, the City can manage growth while protecting the environment, contributing to economic growth and quality of life, and maintaining a balanced municipal fiscal framework.	•	•
There is a need to direct population growth within the city's boundaries to create compact communities and protect natural areas.	•	•
The City's land-use planning must better achieve a balance between individual rights, societal needs, and environmental conservation.	•	
Residents demand improvements to Ottawa's local environment.	•	
Ottawa needs to bolster its labour force amidst an aging and suburbanizing population.	•	•
The city requires more housing choice to accommodate population, changing household types, and employment growth.	•	•
Ottawa must have adequate housing, infrastructure, and employment opportunities to remain competitive in a shifting global economy.		•
The City must prepare for the impacts of climate change on emergency management strategies and vulnerable people.		•

transit use; and zero waste) and a strong economy (economic prosperity; more local business) (City of Ottawa, 1991, Chapter 2, p. 6). As the ‘strategies’ sub-section will outline, the City developed intensification policies to achieve these outcomes.

A decade later, in the early 2000s, environmental problems, population changes, economic challenges, and health remained key concerns, as indicated by the City’s 2003 Official Plan (Table 5). The 2003 Plan identified sustainability as its overarching goal, which it defined as “meet[ing] the needs of the present generation without compromising the ability of future generations to meet their own needs” (City of Ottawa, 2003, Chapter 1, p. 17). While this definition that seems managerial in comparison to the value-laden definition outlined in the 1991 Plan, the 2003 Plan justified drawing on this definition from the Brundtland Report based on the notion that cities cannot be separated from the global context, with the implication that municipal governments have a responsibility to locally implement sustainable development policies set at the global level (City of Ottawa, 2003, Chapter 2, p. 2). The 2003 Official Plan had a more global, and sometimes more urgent, outlook than its predecessor, aiming to make Ottawa more globally competitive in terms of quality of life and economic opportunities to continue to attract immigration and accommodate the newcomers to Canada needed to sustain the labour force amidst an aging population (City of Ottawa, 2003, Section 1, p. 3). It also noted the importance of being ready for the impacts of rising global energy costs and climate change and generally preparing to “buffer widespread downturns” in the global, and especially, American economies (City of Ottawa, 2003, Chapter 1, p. 3). The 2003 Plan also highlighted the challenges associated with the growing costs of maintaining the infrastructure built over the past 50 years to accommodate Ottawa’s population growth as well as growing health problems associated with physical inactivity, namely obesity and chronic disease (City of Ottawa, 2003, Chapter 1, p. 3).

In comparison to the 1991 Official Plan's focus on balancing ecological and societal needs, the 2003 Official Plan increasingly emphasized achieving sustainability by improving Ottawa's liveability—more specifically, by creating new places for work, housing, shopping, and recreation (City of Ottawa, 2003, Prologue – p. 2). As the next section discusses, implementing these liveability ends was mainly sought through land-use intensification. In these early Official Plans, little attention was given to GHG emissions specifically, beyond recognizing emissions reductions as one of several environmental benefits achieved through sustainability policies.

4.2.2. Strategies: Land-use intensification as sustainability

The discourse analysis found that land-use intensification and neighbourhood design were the main strategies of the City of Ottawa's 1991 and 2003 Official Plans in order to implement sustainable development and address challenges related to the environment, population change, and changing economic circumstances. Land-use intensification was depicted as an enabling mechanism for other policy goals, including creating liveable neighbourhoods, attracting employment, improving the environment, and reducing personal vehicle use (Table 6).

Land-use intensification was not an explicit strategy in the 1991 Official Plan, but a suburbanizing and aging population, smaller household sizes, a need for more downtown labour, and environmental concerns associated with urban sprawl rationalized the need for more housing and business spaces within existing built-up areas. It was proposed that Ottawa's employment base could be grown and diversified by attracting new businesses and institutions to the city (City of Ottawa, 1991, Chapter 4, p. 1). To attract business and institutions, the City planned to create new mixed-use areas for residential and commercial development activities and designate

Table 6. Policy strategies, 1990 to the early 2000s.

Strategies	Official Plan (1991)	Official Plan (2003)
Advance land-use intensification to create compact communities that provide housing, support public health and well-being, reduce GHG emissions, support the economy, and protect natural areas and farmland.	•	•
Facilitate employment growth and diversification by attracting labour through the creation of economically and culturally vibrant neighbourhoods.	•	•
Encourage sustainable transportation through improved cycling and pedestrian infrastructure and better public transit.	•	•
Protect human and environmental health by reducing air pollution and waste.	•	•
Eliminate pesticides to improve water quality and environmental health.	•	
Reduce GHG emissions through sustainable transportation, compact neighbourhood design, and energy conservation.	•	•
Encourage community-based sustainable food production to support public health and environmental sustainability.		•
Establish greenspace corridors and grow the urban forest to provide recreation and wildlife habitat.	•	•

vacant and “underutilized” land for new employment (City of Ottawa, 1991, Chapter 4, p. 1). Even though Ottawa’s downtown was expected to remain the largest employment area, the proportion of employment outside downtown was growing. The City adopted strategies to concentrate employment outside of downtown along existing transportation corridors in an effort to relieve pressure on the public transit system downtown, and envisioned new mixed-use employment centres for spaces previously used for manufacturing and warehousing (Official Plan 1991, Chapter 2, p. 7). At the same time, the 1991 Plan estimated that the City would require tens of thousands of new residences in the coming decades, mostly in the form of apartments, to accommodate an anticipated shift towards a greater proportion of single- and two-person households (City of Ottawa, 1991, Chapter 1, p. 7). Overall, these strategies depict a shift towards a more densely-built city and the transition of manufacturing spaces to professional jobs.

In addition to strategies to create housing and employment spaces, the 1991 Official Plan introduced a number of new measures to protect the natural environment. Downtown Ottawa would be improved as a cultural and economic hub through the addition of parks, pedestrian areas, an enhanced urban forest, and less pollution (City of Ottawa, 1991, Chapter 2, p. 6). More general objectives included supporting local agriculture, protecting greenspaces, reducing private vehicle use, supporting public transit and active transportation, and conserving energy. The 1991 Plan introduced specific environmental management policies, like environmental assessment for development projects, establishing local baseline environmental data, water and energy conservation programs, beach clean-ups programs, and a pesticide ban (City of Ottawa, 1991, Chapter 5, p. 24-25). Environmental protection was considered to have intrinsic value as well as value for creating attractive, healthy neighbourhoods.

The 2003 Official Plan doubled down on intensification and explicitly identified it as the main strategy to achieve the Plan's objectives. The 2003 Plan aimed to operationalize sustainable development by creating compact neighbourhoods conducive to walking, cycling, and public transit, and making neighbourhoods more accessible and attractive (City of Ottawa, 2003, Section 1, p. 4). In the 2003 Official Plan, intensification is defined as "manag[ing] growth so that development is compact and land within the urban boundary is used efficiently" (City of Ottawa, 2003, Section 1, p. 5). The City planned for 90 per cent of growth in population, jobs, and housing between 2006 and 2031 to occur within the existing urban boundary (City of Ottawa, 2003, Section 2, p. 7). The areas targeted for residential and employment intensification were downtown Ottawa, as well as designated mixed-used centres, historical main streets outside of downtown, and the town centres of Orleans, Kanata, and Barrhaven (City of Ottawa, 2003, Section 2, p. 13). Intensification would be promoted in these areas through minimum density targets, even if these targets required amending community design plans (City of Ottawa, 2003, Section 2, p. 16). According to the 2003 Plan, intensification would also be promoted outside of these target areas on remediated brownfield sites, such as 'underused' spaces like parking lots as well as on unused spaces like former industrial sites (City of Ottawa, 2003, Section 2, p. 17-18). Building would be concentrated around rapid transit stations and transit corridors to encourage public transit use while using existing infrastructure and services efficiently, reducing costs to the municipality (City of Ottawa, 2003, Section 2, p. 4). Effectively, the 2003 Official Plan embedded intensification throughout the City's bylaws and policies. At the same time, the 2003 Official Plan outlined numerous measures to protect the natural environment and improve quality-of-life for residents. These included regulations protecting the urban tree canopy and

natural areas from development, policies on assessing and monitoring natural areas like wetlands, and plans to increase greenspace (City of Ottawa, 2003, Section 2, pp. 34-45).

In the City's 1991 and 2003 Official Plans, policies intended to promote sustainability and liveability were key to managing population growth, increasing employment, and attracting labour. Land-use intensification, reflecting provincial Smart Growth policies, was intended to create more desirable neighbourhoods while providing more housing suitable to a growing and changing population. Coinciding with reduced federal and provincial funding, the City's policy-making reflected a growing need to use municipal services and infrastructure efficiently due to concerns about the costs of servicing urban sprawl.

4.3. Federal infrastructure spending and provincial austerity (2010 to present)

Following the economic recession that began in 2008, neoliberal policy deepened in Canada (Stoney & Krawchencko, 2013). As a stimulus measure intended to counteract the recession, the federal government increased infrastructure funding for local projects, but reduced overall government spending and cut funding to many departments using economic crisis as the justification (Stoney & Krawchencko, 2013). Fanelli and Thomas (2011) argue that although the federal government slightly increased transfer payments to municipalities, they did not outweigh the cuts made by previous governments. The election of a Conservative federal government slowed the growth of infrastructure funding, although the 2009 federal budget still provided \$12 billion in new infrastructure funding, in addition to \$1.25 billion to support municipal budgets, though the latter funding was contingent on municipalities securing public-private partnerships (Fanelli, 2014). The Building Canada Infrastructure Plan provided \$40 billion for municipal infrastructure between 2007 and 2014, but still, in 2014, federal transfers to municipalities

accounted for only 1.4 per cent of municipal budgets (Fanelli, 2014). During this period, the federal government cut corporate and income taxes, resulting in \$220 billion of lost revenue, which could have been spent to address the needs of municipalities (Fanelli, 2014). However, the subsequent federal government expanded infrastructure funding again, such as through the \$33 billion Investing in Canada Program accounted in 2018 (Infrastructure Canada, 2018). In the 2010s, the Government of Ontario intensified its neoliberal policies by further emphasizing privatization, reducing public funding, and de-regulating the environment. After the 2008 recession, the provincial government implemented a range of neoliberal austerity measures related to social and economic policy with the aim of tackling a large budgetary deficit (Evans & Albo, 2011; Fanelli & Thomas, 2011). With the 2016 election of the Conservative government led by Doug Ford, these austerity policies were often rationalized with anti-urban discourse (Budd, 2020). According to Budd (2020), the provincial government argued that economic crisis, attributable to provincial debt and Ontario's cap-and-trade system, implemented by the previous Liberal government required austerity measures. The provincial government deepened a commitment to neoliberalism through a heightened discursive emphasis on free markets, personal freedoms, private property, and reducing government spending (Budd, 2020). It implemented these ideals through new funding strategies by promoting public-private partnerships in the healthcare sector, privatizing public assets, strengthening inter-provincial trade, and weakening the Environmental Assessment Act by adopting a risk-based approach to environmental approvals (Fanelli & Thomas, 2011). Soon after its election, the government scrapped the province's cap-and-trade system, arguing that this policy was responsible for the province's rising electricity prices (Lachapelle & Kiss, 2019). At the same time, the 2020 Provincial Policy Statement obligated municipalities to take action on climate change by

reducing GHG emissions (Government of Ontario, 2020). Furthermore, the provincial government promoted an anti-cosmopolitan, anti-urban discourse that stood in opposition to municipal ‘sustainable development’ policies of past decades. In this discourse, ‘elites’, who are often considered to be downtown urban dwellers, are depicted as wasting and mishandling public taxes, increasing the economic burden on the ‘middle class’ (Budd, 2020). Walks (2015) argues that the pro-car, pro-suburban messages of former Toronto mayor Doug Ford resonated with many voters, who were fed up with the gentrification caused by the City of Toronto’s intensification and transit-oriented development policies. In the 2010s onwards, provincial austerity and anti-urbanism discourse, alongside slow growth in federal funding which to some extent encouraged municipal public-private partnerships, coincided with City of Ottawa policies that introduced new rationales and strategies to take action on climate change.

4.4. Climate change and sustainability policies in Ottawa: 2010 to present

From 2010 to the present, the City of Ottawa’s public policy has sought to harness population growth in order to prepare Ottawa for a number of perceived threats facing the city, specifically the threat of economic recession, technological and population changes, and the climate crisis. This section presents the results of the discourse analysis for four contemporary policy documents—the 2021 Official Plan, the 2020 Climate Change Master Plan, the 2020 Energy Evolution Strategy, and the 2013 Plan for Sustainability and Resilience in Canada’s Capital Region. The findings indicate that from the 2010s to present, the City of Ottawa’s public policy-making uses economic and environmental challenges to justify a need to advance Ottawa’s place in a global economy, be a responsible climate actor, and protect municipal finances from climate impacts. Through a technical and accounting-based narrative that reflects international climate

science, like the work of the IPPC (IPCC, 2019), rationales in the City's contemporary policy documents introduce concepts like climate mitigation, adaptation, and resilience. Strategies continue to emphasize land-use intensification, now also articulated as a measure to mitigate and adapt to climate change, as well as infrastructure and technology-based strategies like building retrofits and charging stations for zero-emission vehicles. This section presents the rationales and strategies present in the City's contemporary policy documents, revealing how the City of Ottawa's climate response is a mechanism for securing government funding and private sector investment.

4.4.1. Rationales: Climate action and economic competitiveness

The discourse analysis indicates that since 2010, the City of Ottawa's public policies have focussed on navigating an uncertain future and preparing for climate hazards, while capitalizing on the economic opportunities afforded by climate change and population growth (Table 7). A number of global and local phenomena are seen as threats to the well-being of residents and the function of the municipal government in addition to being opportunities for Ottawa to improve its economy and urban environment. The Plan for Sustainability and Resilience in Canada's Capital Region (2012) succinctly describes these threats, stating that the Region must:

meet long-term challenges that stem from global forces such as . . . [a] growing and changing population . . . [a] shifting global economy . . . [t]echnological changes . . . [a] changing climate . . . [r]esource scarcity and rising energy prices; and . . . [s]udden shocks such as earthquakes and floods. Those communities that manage to prosper in this century will be those that plan for change and make sustainable choices; not only to adapt to changing circumstances but also to seize new opportunities as they arise (p. 7).

Table 7. Policy rationales, 2010 to the present.

Rationales	Climate Change Master Plan (2020)	Energy Evolution: (2020)	A Plan for Sustainability and Resilience (2012)	Official Plan (2021)
Ottawa's infrastructure, economy, natural environment, and public health are vulnerable to climate change.	•	•	•	•
Scientific bodies and governments around the world are calling for action on climate change.	•	•	•	•
Climate emergency declarations demonstrate the need for climate action.	•	•		•
The City of Ottawa has substantial influence over GHG emissions due to its control over infrastructure and services.	•	•	•	
The City of Ottawa is well-positioned to coordinate and catalyze actors involved in responding to climate change.	•	•		
As a national capital, Ottawa should set an example of climate action.			•	•
Environmental policies keep Ottawa economically competitive, globally and regionally.		•	•	•
Ottawa needs to prepare for an increasingly uncertain future.			•	•

Rationales	Climate Change Master Plan (2020)	Energy Evolution: (2020)	A Plan for Sustainability and Resilience (2012)	Official Plan (2021)
The City has a unique role in implementing policies and financing tools to respond to climate change.		•		
Despite its potential, the City is limited in its ability to tackle major challenges due to financial and jurisdictional barriers.	•	•	•	

These concerns are reflected throughout the City’s contemporary policies, with predominant issues being managing population growth, the financial and infrastructure risks posed by climate change, and the need to advance economic competitiveness. The policy documents frequently switch between narratives that present these issues as opportunities and threats.

Largely continuing the growth management orientation of earlier Official Plans, the City’s 2021 Official Plan is framed in terms of planning for considerable population growth (City of Ottawa, 2021a). The 2021 Plan indicates that the City will continue seeking population growth in the future, by “setting the stage for the city to reach a population of 2 million” (City of Ottawa, 2021, p. 3). Ottawa is expected to grow by 402,000 people (City of Ottawa, 2021a, p. 13), reaching a population of 1.4 million people in 2046 (City of Ottawa, 2021a, p. 2). The 2021 Plan portrays population growth as an opportunity for Ottawa, stating that population growth can help shape Ottawa into a city of “vibrant and walkable 15-minute neighbourhoods”, which are considered as contributors to public health, environmental sustainability, and overall well-being of residents (City of Ottawa, 2021a, p. 13). Nevertheless, population growth is also portrayed as

contributing to a number of challenges the City must manage. The 2021 Plan states that the City must accommodate a more diverse and aging population, improve housing affordability, and ensure neighbourhoods are socially inclusive places where people want to live (City of Ottawa, 2021a, p. 2). Additionally, population growth will also complicate efforts to reduce Ottawa's GHG emissions and withstand economic, environmental, and social crises (City of Ottawa, 2021a, p. 2). To reconcile these challenges, the 2021 Official Plan makes the case for harnessing population growth to drive urban improvements, such as better public transit, improved urban design, and economic diversification (City of Ottawa, 2021a, p. 2). The slogan of the 2021 Official Plan is to make Ottawa "the most liveable mid-sized city in North America", with strong communities, a diverse economy, and attractive greenspaces (City of Ottawa, 2021a, p. 2). These rationales echo the approach of the 1991 and 2003 Official Plans, although the 2021 Official Plan makes little explicit reference to sustainability. Nevertheless, it continues to emphasize land-use intensification as a means of creating desirable, compact neighbourhoods suitable for active transportation, using municipal resources in a cost-effective manner, and protecting agricultural and natural areas (City of Ottawa, 2021a, p. 9). At the same time, the 2021 Official Plan, which has adopted a climate lens to guide land-use planning, identifies land-use intensification as key to addressing climate change through reduction of GHG emissions as well as improving liveability: "[a] liveable city is one where people can live, work and play in all future climate conditions" (City of Ottawa, 2021a, p. 23). Other goals that were previously articulated as sustainability measures in older Official Plans are now also considered to be important to climate response. A shift in transportation modes "is urgently needed to meet the City's climate change goals, given that 40 per cent of Ottawa's current greenhouse gas emissions are transportation related" (City of Ottawa, 2021a, p. 9). Local agriculture is considered to be

important for sequestering carbon and improving food security in the face of climate change (City of Ottawa, 2021a, p. 25-26). A larger urban tree canopy and protected wetlands are important for biodiversity and human health, as well as for providing “climate services” like flood protection, mitigating heat, and protecting against wildfires (City of Ottawa, 2021a, p. 25). Responding to climate change while accommodating population growth is considered to be an essential element of Ottawa’s success, largely defined as remaining competitive at attracting residents compared to other cities:

Ottawa’s economic success continues to be based on maintaining a liveable city and having affordable market-based housing options in relation to larger cities. We need to attract skilled workers to support growing and new enterprises in Ottawa and be a choice destination for new Canadians. Becoming more liveable and affordable relative to other cities is a key to Ottawa’s success (City of Ottawa, 2021a, p. 11).

The 2021 Official Plan embeds economic development throughout the City’s policy framework, seeking to ensure that Ottawa’s land-use designations can adapt changing economic conditions and new industries and business models (City of Ottawa, 2021a, p. 11). Ottawa’s projected population growth can be harnessed to benefit the economy by providing a larger domestic consumer market and attracting investment from the global private sector (City of Ottawa, 2021a, p. 16). The 2021 Plan identifies a need to maintain transportation and economic connections with Toronto and Montreal, allowing this “mega-region” to compete in a global economy increasingly oriented around the knowledge sectors and centred on large economic regions (City of Ottawa, 2021a, p. 16). At the same time, Ottawa must maintain its liveability to improve its competitive advantage over Toronto and Montreal (City of Ottawa, 2021a, p. 18), in order to attract residents. A concern for remaining competitive is also reflected in A Plan for

Sustainability and Resilience in Canada's Capital Region, which is that improving living standards in Brazil, Russia, China, and India (BRIC) will lead to these countries outcompeting Canada when it comes to attracting businesses and immigrants (City of Ottawa et al., 2012, p. 18).

Despite the importance of economic development in these policy documents, it is recognized that economic growth has exacerbated environmental problems in the past, in spite of policies intended to protect the environment. According to the City, technological developments, such as energy efficiency improvements in buildings and products, have been cancelled out by growth in personal consumption, such as growing private vehicle use, travel, housing size, and purchase of technological gadgets and other products (City of Ottawa et al., 2012, p. 18).

Ottawa's city-wide emissions declined by 14 per cent between 2012 and 2018 (Figure 1), but this decline is due largely to the Province of Ontario's phaseout of coal-powered electricity generation, as well as a decline electricity consumption that the City does not expect to continue (City of Ottawa, 2020b). To address the failures of urban sustainability approaches to resolve environmental problems, the City argues that society must implement policies and develop technologies that reduce material and energy consumption, so that economic growth can continue without harm to the environment (City of Ottawa et al., 2012, p. 18). The contemporary policy documents present climate strategies as an opportunity to reduce Ottawa's environmental impact while improving its economy. The 2021 Official Plan anticipates that a low-carbon economy will create new employment in the construction industry due to the need for improved building energy performance and deep energy retrofits (City of Ottawa, 2021a, p. 18). In the

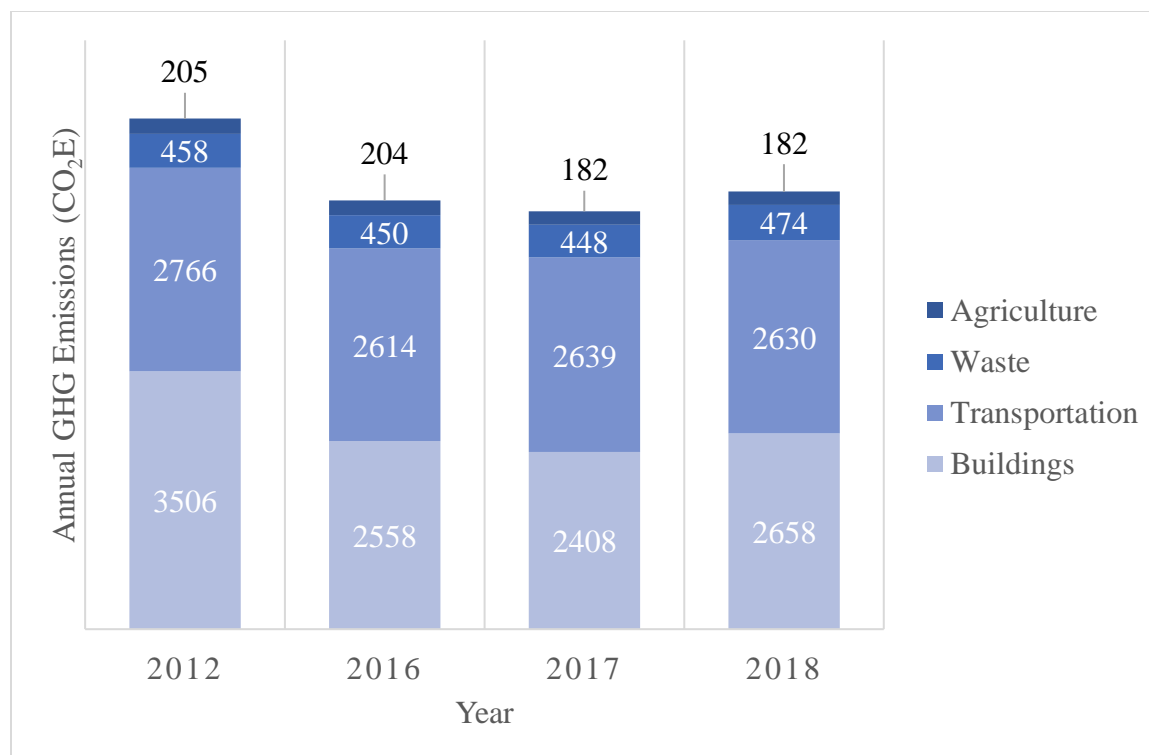


Figure 1. Ottawa's annual community GHG emissions by sector, 2012 to 2018. Adapted from (City of Ottawa, 2020b).

City's Energy Evolution strategy, it is expected that reduced energy consumption and greater use of renewable energy as a result of the City's mitigation, adaptation, and resilience plans is creating new green jobs in manufacturing, construction, and trades (City of Ottawa, 2020b, p. 14). Energy Evolution posits that the City's low-carbon policies will reduce operating costs for businesses, which is expected to help attract investment to the city and to encourage business innovation and entrepreneurship (City of Ottawa, 2020, p. 14). Furthermore, the transition to more energy supplied from local sources is seen as being an opportunity to "keep millions of energy dollars circulating within the local or regional economy" which is expect to attract more businesses and improve housing affordability (City of Ottawa, 2020, p. 15) as well as support the development of Ottawa's clean technology sector (City of Ottawa, 2020, p. 14).

In the City's contemporary policies, climate action is an economic opportunity but also a risk to infrastructure, economies, the natural environment, and public health (City of Ottawa, 2021a, p. 23; City of Ottawa, 2020a, p. 3). There is an urgent need to mitigate and adapt to climate change, given its potential to cause "dangerous disruptions" and "sudden shocks", like food and water shortages (City of Ottawa et al., 2012, p. 18). Ottawa is expected to experience worsening impacts due to climate change, with the City projecting for Ottawa to become hotter and wetter, have four times as many hot days, and have more frequent extreme weather events by 2050 (City of Ottawa, 2021a, p. 23; City of Ottawa, 2020a, p. 3; City of Ottawa et al., 2012, p. 18). Referencing the International Panel on Climate Change (IPCC)'s Special Report on Global Warming of 1.5°C (IPCC, 2019), a comprehensive technical assessment of land and climatic systems which modelled GHG emissions pathways and carbon budgets (IPCC, 2019), the City anticipates that climate change will affect human health due to heat waves; increase biodiversity, habitat, and species loss; increase sea-level rise and flood risk; and negatively affect the economy, especially in middle-income countries (City of Ottawa 2020a, p. 8). Additionally, there is concern about the risks posed by climate change to infrastructure, municipal finances, and emergency preparedness. For example, the policies highlight that damage due to severe weather events in Canada cost \$2 billion in 2018, and that municipalities and Canada are already experiencing rising costs due to climate-related disasters like floods, fires, and tornados (City of Ottawa, 2021a, p. 30; City of Ottawa, 2020a, p. 3; City of Ottawa, 2020b, p. 6). As pointed out in Energy Evolution, significant flooding in Toronto and Calgary subsequently increased insurance costs and financial risks for the municipal governments due to higher insurance premiums and deductibles as well as insurance policy changes that would reduce payouts for flooding (City of

Ottawa, 2020a). Already, Ontario municipalities' liability premiums have increased by 22.2% between 2007 and 2016 due to increased liability coverage (City of Ottawa, 2020a).

In addition to highlighting the economic opportunities and financial, social, and ecological risks of climate change, the City rationalizes climate action by positioning itself alongside other cities and international actors in its approach to climate change. In policies from previous decades, the City noted that public opinion and advocacy from local residents influenced the adoption of environmental policies; in the contemporary plans, the City positions itself alongside other cities. Ottawa City Council declared a climate emergency on April 24, 2019, which the City highlights has been done by hundred of municipal and regional governments across Canada, as well as the House of Commons, the Assembly of First Nations, and thousands of climate scientists from around the world (City of Ottawa, 2020a, p. 8). The City references calls to action from the IPCC (City of Ottawa, 2020a, p. 2), the World Health Organization, and the Government of Canada (City of Ottawa, 2021a, p. 23). The policy documents also position municipal governments, and the City of Ottawa in particular, as being uniquely positioned to lead society's climate response. According to the 2021 Official Plan, the climate emergency declaration was undertaken to signify that municipalities have a responsibility to respond to climate change (City of Ottawa, 2021a, p. 23). It is remarked that municipalities manage a large proportion of the services and infrastructure needed to respond to environmental challenges, and therefore are best-suited to respond to sustainability challenges out of all three levels of government (City of Ottawa et al., 2012, p. 19). Citing the Federation of Canadian Municipalities, the City notes that Canadian municipalities own roughly 60 per cent of Canada's infrastructure and influence approximately half of Canada's greenhouse gas emissions (City of Ottawa, 2020a, p. 6). The City of Ottawa influences GHG emissions by directing land uses and

through its control of a range of services that influence energy use, including housing, transportation systems, water and sewer infrastructure, and waste management (City of Ottawa, 2020b, p. 17). Furthermore, the plans put forward that the City of Ottawa is well-positioned to coordinate and catalyze actors involved in responding to environmental issues. It is stated that through the City's regulatory powers granted to municipalities by the Province of Ontario, the City plays an important role in fostering dialogue and collaboration between various stakeholders to achieve resilience and sustainability (City of Ottawa, 2020a, p. 7). Finally, the plans convey that as a major city and national capital, Ottawa should be an example of environmental response by showing leadership nationally and internationally (City of Ottawa, 2021a, p. 133; City of Ottawa et al., 2012, p. 27).

The plans underscore that climate change is a threat to Ottawa and municipalities globally, and the City of Ottawa has the responsibility and capacity to take action on climate change. By positioning itself alongside global calls to action and climate emergency declarations made by dozens of other governments, the City rationalizes climate policies amidst a provincial political situation that is increasingly hostile to urban environmental policy. The City also positions itself to take advantage of the economic opportunities afforded by a low-carbon transition, to solicit increased federal infrastructure funding as well as private investment, and to compete with other cities as remaining a liveable city in the midst of climate crisis. These goals are supported by a number of contemporary strategies, including the continuation of land-use intensification policies as well as new solutions focused on technology and infrastructure.

4.4.2. Strategies: Technological and infrastructure solutions

The discourse analysis identified that the City's contemporary policies continue the land-use intensification policies of previous Official Plans as well as introduce new strategies that emphasize technological solutions and infrastructure improvement (Table 8). These new strategies will depend on new partnerships and investment pathways with other levels of government and the private sector for funding. To capture the benefits of population growth while mitigating its impacts, the overarching strategy of the 2021 Official Plan is land-use intensification. Between 2021 and 2046, the City plans to steadily increase the rate of growth that occurs within existing built-up areas, with greater than 50 per cent of new growth projected to occur in existing built-up areas starting by the 2040s (City of Ottawa, 2021a). Land-use intensification is expected to continue advancing the sustainability benefits of compact neighbourhoods, sustainable transportation, and greenspace protection outlined in earlier Official Plans, even though these benefits are not identified explicitly through a sustainability narrative. The discourse analysis reveals that the City's contemporary policies introduce new strategies intended specifically to mitigate and adapt to climate change. While the 2021 Official Plan continues to emphasize land-use intensification as essential to reducing GHG emissions, the City's outlines further climate-specific strategies in the Climate Change Master Plan, which outlines broad climate policy, and the Energy Evolution strategy, which proposes programs and funding models to achieve these policy goals. Under the City's mitigation policies, there is significant emphasis on tracking and monitoring GHG emissions of the City's corporate activities and from the city as a whole (City of Ottawa, 2020a, pp. 10-14). The target is to eliminate corporate emissions by 2040 and community emissions by 2050 (City of Ottawa, 2020a, p. 2). To achieve these climate mitigation targets, the City proposes a number of

Table 8. Policy strategies, 2010 to the present.

Strategies	Climate Change Master Plan (2019)	Energy Evolution: Ottawa's Community Energy Transition Strategy (2020)	A Plan for Sustainability and Resilience in Canada's Capital Region (2012)	Official Plan (2021)
Facilitate population and employment growth through intensification based on compact neighbourhood design.			•	•
Reduce GHG emissions and improve 'liveability' through sustainable transportation and compact neighbourhood design.			•	•
Monitor GHG emissions to ensure reduction targets are met, such as through carbon budgeting.	•			
Reduce GHG emissions through electrification, renewable energy, and energy efficiency and conservation.	•	•	•	•
Adapt to climate change through infrastructure- and nature-based solutions (e.g. flood plain mapping, urban forestry, stormwater improvements).	•	•	•	•
Seek investments from and partnerships with senior levels of government and the private sector for climate initiatives.		•		

technological and infrastructure-related strategies. A carbon budgeting system for the City is put forward, which would set where and how many GHGs can be emitted, and would require on-going monitoring of GHG emissions (City of Ottawa, 2020a, p. 28). In addition to carbon budgeting, the City generally intends to increase renewable energysupply, reduce energy consumption, electrify heating and transportation systems, and implement carbon capture storage and sequestration (City of Ottawa, 2020a, p. 4). There are specific plans for electric vehicle charging infrastructure; car-free zones; public transit electrification; residential, commercial, and municipal building retrofits; and renewable natural gas created from organic waste streams (City of Ottawa, 2020a, 2020b). While the public is targeted through a small number of proposed solutions, such as through a proposed strategy to increase electric vehicle purchases (City of Ottawa, 2020a, p. 6), most proposed solutions require the involvement of municipal, institutional, and business actors, such as building owners to implement retrofits.

The City's policies regarding adaptation and resilience will be further detailed in an upcoming Climate Resiliency Strategy and climate vulnerability assessment, which are currently under development. Therefore, the City's adaptation and resilience policies are presently less-developed than its mitigation policies, but the current policy documents outline some solutions intended to increase climate resilience. The City's contemporary policies use the terms 'adaptation' and 'resilience' interchangeably, defining these terms as the capacity to withstand the felt impacts of climate change, including floods, heat waves, droughts, severe storms, and wildfires in the Climate Change Master Plan and the Energy Evolution strategy (City of Ottawa, 2020a, p. 16; 2020b, p. 16). Resilience measures outlined in the policies include emergency preparedness, such as using education and outreach to prepare residents for climate-related hazards, like ticks and Lyme disease (City of Ottawa, 2020a, p. 17). However, adaptation and

resilience solutions focus even more heavily on improved physical and natural infrastructure solutions. These measures include improving flood risk mapping and profiling, which in turn will guide land-use planning and infrastructure design; increasing stormwater sewer capacity to accommodate overflows; increasing the urban forest canopy; and providing grants to residents and farmers to help them adapt to flooding and drought (City of Ottawa, 2019, pp. 17-18).

Furthermore, protecting natural areas and wetlands is framed as a “nature-based solution” that builds resilience to climate change through flood protection, heat wave mitigation, and stormwater management (City of Ottawa, 2021, pp. 25-26).

The City’s contemporary policies emphasize that their implementation depends on investment from and coordination with the federal and provincial governments and the private sector. While policy implementation will draw in part on municipal user fees and debt financing, a lack of municipal financial resources is highlighted throughout the plans (City of Ottawa, 2020a, p. 7; 2020b, p. 17). As outlined in Energy Evolution, funding for the climate policies will depend on some municipal sources like user fees, development charges, debt financing, and cost savings, as well as from funding from other governments and private capital (City of Ottawa, 2020, pp. 57-65). It is noted that “the municipality alone will not be able to accomplish the scale of investment required” to achieve climate actions (City of Ottawa, 2020b, p. 9). Citing the Federation of Canadian of Municipalities and Insurance Bureau of Canada, the Energy Evolution strategy notes that Canadian municipalities will require a substantial investment, an estimated \$5.3 billion, to minimize the most serious impacts of climate hazards (City of Ottawa, 2020b, pp. 16-17). Furthermore, the Energy Evolution strategy, which sets out the financial model in support of the City’s climate policies, is concerned that the required financial resources will remain out of reach, noting a risk that the policies could be “under resourced and unfunded (City

of Ottawa, 2020b, p. 1). It is suggested that these financial barriers could be due to limited funding from other actors, or due to City Council decisions, given that “proposed projects are contingent on future Standing Committee and Council approval as well as future staff and budget” (City of Ottawa, 2020b, p. 2). In addition to financial challenges, the City notes that provincial regulations are also a barrier to implementing some policies, given that building standards, vehicle standards, fuel content, road user fees, and energy policy are within provincial jurisdiction (City of Ottawa et al., 2012, p. 54; City of Ottawa, 2020b, p. 37), although municipal legislation gives municipalities broad powers to participate in energy planning and pass by-laws related to climate change (City of Ottawa, 2020b, p. 30). To overcome financial challenges, the City intends to draw heavily on partnerships with and investment from government and the private sector, with the City taking on a coordinating role. “Private capital” is identified as a funding source for many planned actions, including building owners and developers, car dealers, utilities companies, as well as public-private partnerships through the Canada Infrastructure Bank (City of Ottawa, 2020a, p. 7; 2020b, pp. 57-65). In particular, the City intends to leverage its ability to attract capital through financing and policies. Emissions reductions within Ottawa require the City to create policies and provide financing tools that create conditions for market actors to respond to climate change (City of Ottawa, 2020b, p. 60). The Energy Evolution Strategy notes that markets have the potential to successfully respond to climate change, if given the correct signals from government, citing Canada’s national carbon price as an example of a powerful market signal (City of Ottawa, 2020b, p. 13). Other financing strategies include pursuing public-private partnerships (P3s) and taking advantage of the City’s ability to borrow funds at low interest rates, making P3s more attractive to investors (City of Ottawa, 2020b, p. 60). Climate action is also positioned as an opportunity to receive funding from provincial and

national government programs, which often require municipalities to have adopted climate change policies in order to be eligible for the program (City of Ottawa, 2020b, p. 15).

Furthermore, according to Energy Evolution, adopting a coordinated financing strategy to respond to climate change would allow the City to reinvest savings achieved from climate action into future climate action, resulting in cost savings for the City (City of Ottawa, 2020b, p. 60).

In addition to targeting private capital to fund climate initiatives, the City intends to use education and incentives to encourage individual and organizational action in compliance with its policies (City of Ottawa, 2020a, p. 19). It will also introduce governance frameworks that increase community capacity to act, share accountability in climate action, and ensure priorities of various actors are aligned (City of Ottawa, 2020a, p. 19). The City notes that the implementation of carbon reduction initiatives and services could serve to generate revenue for the City, even though it acknowledges that the status quo is for the private sector to operate profitable services, while municipalities operate services with no return on investment (City of Ottawa, 2020b, p. 60).

From 2010 to the present, the City's policies advance land-use intensification and technological and infrastructure measures to mitigate the risks posed by climate change to the well-being of residents and municipal finances and infrastructures. In the midst of provincial austerity and anti-urban discourse, alongside increasing federal investments in infrastructure, the City's contemporary policies avoid sustainability discourses adopted in previous decades, while maintaining sustainability strategies focused on increasing liveability, with an emphasis on remaining competitive at attracting labour. Climate change, despite being a risk, is also an opportunity for developing a low-carbon and green economy in Ottawa. These contemporary policies position the City as a responsible climate actor as well as financial and regulatory

coordinator as it seeks investments from the private sector and government to fund its climate response.

4.5. Insights from municipal staff

The remainder of this chapter draws on interviews and correspondence with City staff to expand on the results of the discourse analysis. First, these interviews provide further evidence that sustainability discourses are giving way to mitigation and resilience discourses in contemporary policy-making. The interviews also shed light on the practical uses of environmental discourses from a staff perspective, as these discourses help to operationalize environmental policy. Finally, the interviews reveal the variations between ‘official’ policy perspectives and those held by staff members, a finding that suggests that ‘official’ policy discourses are strategically developed to be politically and publicly acceptable.

A City staff member explained that sustainability was no longer needed to be explicitly rationalized because it had become “regularized” throughout the City’s policy and operations framework over the years (interview with City staff member A). The City has implemented sustainability through municipal operations like ensuring adequate road infrastructure, planning for appropriate housing for targeted demographics, and maintaining energy systems (interview with City staff member A). Furthermore, sustainability focussed on local issues like the efficient provision of resources, while the City’s recently adopted climate lens afforded a needed globalized outlook (interview with City staff member A). A climate lens allowed the municipality to compare its environmental actions to other municipalities and assess whether the City was taking enough action to reduce its share of the global ecological footprint (interview with City staff member A). This statement indicates that ways of thinking about the environment

have practical benefits, providing operational guidance to municipal staff. This could be due to knowledge-sharing, supported by a statement from another City staff member that drawing on the IPCC report was useful because it provided an accurate assessment of climate scenarios by which governments could plan and set individual targets on (correspondence with City staff member B). Furthermore, official environmental discourses may support staff operations by building consensus and reducing political barriers, given that some of the main barriers to achieving the City's emission reductions targets were seen as being largely financial, political, and/or legal. The barriers to achieving the City's GHG emissions reduction targets identified by one staff member included insufficient funding from the private sector and federal and provincial governments; capital and operating costs; regulatory barriers to municipal actions; lack of uptake and buy-in from residents, businesses, and the City; and disagreement among stakeholders on how best to achieve reductions (correspondence with City staff member B).

Staff indicated personal concern about environmental and social issues, a finding that suggests that any adverse socio-ecological outcomes of municipal policy-making are not largely due to staff attitudes in at least some departments, although lack of buy-in from the municipality was identified as a major barrier to achieving the City's emissions reductions targets (correspondence with City staff member B). One staff member emphasized Ottawa's ethical and moral obligations to take action on climate change, going further than the rationales of the policy documents by expressing a sense of justice and altruism to climate action (interview with City staff member A). Noting that Ottawa and Canada have high per capita emissions, the staff member believed it was important for residents to change their lifestyles, for Ottawa to do its fair share for the good of a shared planet, and that even a small contribution makes a difference (interview with City staff member A). Another staff member said City staff hoped to support a

just distribution of the benefits of climate protection efforts, and alleviate unequal climate burdens by applying an equity and inclusion lens to climate-related policies (correspondence with City staff member B). Given that staff have a significant role in the implementation of policy, the ‘official’ discourses presented in Ottawa documents do not necessarily strictly prescribe particular policy outcomes. At the same time, the continuation of sustainability strategies through municipal operations and frameworks suggests that environmental discourses continue to influence policy outcomes even after these discourses have been replaced.

4.6. Discussion: From sustainable urbanism to climate urbanism

Drawing on an EPE perspective, this chapter aimed to show how environmental and economic policies set internationally and provincially are articulated through rationales and implemented through strategies at the municipal scale. Sustainable urbanism and climate urbanism depict the ‘imagined recoveries’ (Jessop, 2012b) portrayed through municipal policies that selectively incorporate environmental responses and externalize the consequences of these recoveries to other peoples, times, and places. The City of Ottawa’s policies reflect the sustainable and climate urbanisms that characterized municipal governance in the 1990s to early 2000s, and 2010 to present, respectively. Since the 1990s, municipal governments have adopted sustainable urbanism that promotes liveability, employment growth, and environmental action in the face of competing challenges (Long & Rice, 2019). These challenges include growing public concern about environmental issues, global economic challenges like recessions and supply chain shocks, and more frequent and severe climate-related impacts like flooding and heat waves (Long and Rice, 2019). In Ontario, these challenges coincide with constrained municipal budgets, challenging governance situations due to municipal amalgamations, fewer environmental

regulations, and deteriorating local infrastructure as a result of federal and provincial austerity policies that cut funding to social programs and infrastructure. At the same time, international efforts to address global environmental challenges, such as the Brundtland Commission and the 2015 Paris Agreement, resulted in international commitments and strategies to improve sustainability and respond to climate change. This chapter presented findings from a discourse analysis of municipal policy documents which indicate that the City of Ottawa's environmental policy-making from 1990 to the present has sought to reconcile the competing challenges facing municipalities by selectively applying international sustainability and climate discourses and strategies. As revealed by the discourse analysis, the City of Ottawa's 1991 and 2003 Official Plans reflect international sustainability discourse to advance land-use intensification in order to respond to growing public demands for environmental action while supporting economic growth. To attract businesses and labour amidst concerns of shortages due to an aging and suburbanizing population, the City operationalized sustainability through the creation of liveable neighbourhoods, especially in the downtown employment centre, reflecting provincial policies that aimed to increase 'Smart Growth' planning. Even though land-use intensification policies were intended to benefit the environment by protecting greenspace from urban sprawl and by reducing GHG emissions from transportation and buildings, Ottawa's GHG emissions remained relatively constant (City of Ottawa, 2020b). Furthermore, Ottawa-Gatineau's public and private greenspace declined by 3 per cent between 2001 and 2019 (Statistics Canada, 2021). These findings indicate that sustainability policies failed to make significant progress on reducing urban sprawl. Amidst economic recession and growing concerns about the climate crisis in the past decade, municipal governance has been characterized by a climate urbanism that emphasizes on cities' economic growth potential, alongside the need to protect critical economic and physical

infrastructures from climate change (Long & Rice, 2019). With the introduction of a new Official Plan in 2021 and several related policy documents related to climate change, the City continues to advance the land-use intensification policies of previous decades, while introducing new lines of thinking and strategies to address climate change. Co-opting the technical language and accounting-based methodologies of international climate science, the City's contemporary environmental policy-making reorients from a social-ecological-economic sustainability approach to an approach that emphasizes the management of GHG emissions and adaptation and resilience to climate-related hazards. These climate objectives will be achieved through technological and infrastructure-focussed strategies like carbon accounting, building retrofits, and climate-resilient infrastructure, intended to be funded largely through government grants and private investment. In an increasingly competitive, global economy that is vulnerable to shocks, the City of Ottawa presents itself as a responsible climate actor, capable of protecting capital investments in economic and physical infrastructures, and positions Ottawa to benefit from a societal transition to a low-carbon economy. The theory of sustainable and climate urbanism, developed by Long and Rice (2019), accurately characterizes the rationalizations, solutions, and underlying logics of the City of Ottawa's policy-making over the past several decades.

From an EPE perspective, the selective incorporation of environmental discourses—from sustainability in the 1991 and 2003 Official Plans, to climate mitigation, adaptation, and resilience in the City's 2021 Official Plan and related policies—enables new avenues for capital investment, such as eco-friendly, market-based housing and climate-resilient infrastructure, that seeks to rectify the environmental and social consequences of private sector activity. The City's policy-making creates a 'sustainability fix', and increasingly, a 'climate fix', to reconcile environmental pressures, in terms of public opinion and real environmental challenges, with the

need to generate economic activity that fund constrained municipal budgets. However, as demonstrated by the failure to decrease GHG emissions and declining green space, amidst growing poverty and lack of housing affordability, the consequences of sustainability policies have been displaced to other places, individuals, and communities. The social implications of the transition from sustainable urbanism to climate urbanism in Ottawa, particularly as they concern the displacement of existing residents, are explored in the next chapter of this thesis.

Chapter Five: Gentrification, Exclusion, and Resistance

This chapter speculates on the socio-ecological implications of the City's contemporary policies, comparing the rationales and strategies of its contemporary policy documents to social justice implications predicted by Long and Rice (2019). While the City's contemporary policies have potential to exacerbate gentrification and increase regulatory measures against residents, equity measures adopted through programming may mitigate some of these impacts. Next, this chapter presents two case examples—the Herongate redevelopment project and the People's Official Plan—to examine how some of these implications have materialized as well as to document how residents contest and engage with neoliberal municipal governance and environmental discourse. In particular, these case examples demonstrate the impacts of market-led intensification on rent prices and the displacement of long-term residents. They also show the need for the City's environmental policies to align with private sector profit-making, although the City is implementing equity policies to counter these impacts on residents.

5.1. Speculating on the social implications of the City of Ottawa's climate urbanism

Scholars are concerned that gentrification, inequitable distribution of environmental benefits and hazards, increased regulation of residents, and the rationalization of social injustices could occur as a result of climate urbanism (Jonas et al., 2011; Long & Rice, 2019; Shi, 2020; While et al., 2010). Long and Rice (2019) predict that the land-use intensification and liveability policies from the sustainable urbanism era will continue. These intensification policies have already been demonstrated to have significant impacts on housing prices in Ottawa, constituting policy-led gentrification (Adamo, 2012). The structure of the housing market in Ottawa has increased land values, raised higher taxes, and encouraged speculative investment decisions, leading to upward

pressures on housing costs (interview with City staff member A). The City is targeting improved housing affordability through regulatory approaches, negotiations with developers, and increasing housing supply and choice. For example, the City negotiated affordable housing units as part of a redevelopment in the Herongate neighbourhood in exchange for an amendment to the City's Official Plan that would allow the developer to exceed building height maximums (interview with City staff member B). Additionally, the City will undertake a feasibility study of inclusionary zoning to mandate affordable housing in development projects as well as an anti-displacement bylaw that would protect renters from evictions due to redevelopment (ACORN Ottawa, 2022). However, land-use intensification continues to form the overall foundation of the City of Ottawa's planning approach and response to environmental issues (interview with City staff member A). Through intensification, the City seeks to increase housing options and diversity, such as by providing more 'missing middle' housing, a term that describes housing types like townhomes and low-rise apartment buildings, which have not been built in extensive numbers in Ottawa since the 1960s (interview with City staff member A). Improving housing choice is expected to alleviate some of the housing pressures caused by Ottawa's changing population demographics, particularly an aging population and smaller household size. Ottawa's low-density residential neighbourhoods were constructed in earlier decades when households tended to have 4-5 people, and Ottawa's average household size is now 1.7 people per household (interview with City staff member A). As the circumstances of older residents changed, such as their children growing up and leaving home, these residents have been unable to move due to housing costs as well as a lack of suitable smaller housing choices in their own neighbourhoods, where they often wish to continue living (interview with City staff member A). As a result, low-density neighbourhoods have lost population, and younger families are seeking 'missing middle'

housing due to the housing prices and social exclusivity of low-rise neighbourhoods (interview with City staff member A). The City's objective is for residents to be able to afford to live in whichever neighbourhood they choose, rather than having to move further away from the city to find affordable housing (interview with City staff member A). Therefore, intensification that increases housing supply is an approach aiming to both improve affordability and reduce the environmental impact of housing, but it remains uncertain whether increased housing supply will significantly contribute to more affordable housing in the absence of anti-displacement and other affordability measures.

Long and Rice (2019) predict that municipal climate policies will rely on partnerships with corporations and the private sector to secure their infrastructures and economies, which some scholars predict will benefit mainly well-off neighbourhoods and residents (Shi, 2020; Long & Rice, 2019). The City of Ottawa's proposed measures for building retrofits and a district energy system in federal government buildings may tend to benefit homeowners, wealthier renters, and professionals. At the same time, 18% of Ottawa's households experience high energy cost burdens, especially low-income households, which also have less capacity to implement energy-saving measures (City of Ottawa, 2020a, p. 55). Low-income areas are less likely to benefit from the implementation of electric vehicle charging-stations, another proposed measure, given the current higher costs of electric vehicles compared to internal combustion engine vehicles. Nevertheless, the City has adopted measures to improve the equity outcomes of its plans for energy retrofits, such as the Better Homes Ottawa Loan Program, a pilot project for energy retrofits, to account for social equity considerations (correspondence with City staff member C). This program ensures 30 per cent of loan funding will be distributed to lower-income households, and it also waives administrative fees for qualifying low-income applicants,

provides free energy retrofit management services to low-income homeowners, and provides interest-free financing for the addition of secondary units in existing homes with the aim of increasing rental housing availability (correspondence with City staff member C). Programs like the Better Homes Ottawa Loan Program, which are designed to advance equity, may be an effective approach to mitigate and adapt to climate change will leading to a more equitable distribution of benefits.

Several scholars speculate that climate urbanism could increase regulation and monitoring, leading to residents being cast as ‘good’ or ‘bad’ carbon citizens (Jonas et al., 2011; Long & Rice, 2019; While et al., 2010). The City’s contemporary policy documents indicate some risk of increased regulation on residents, such as intentions to use education and incentives to encourage individual and organizational action (City of Ottawa, 2020a, p. 19), as well as to align the goals and increase the accountability of various actors (City of Ottawa, 2020a, p. 19). In Ottawa, such marginalization could also occur through the targeted adoption of measures in certain neighbourhoods, especially if these are coupled with urban entrepreneurial strategies that seek to attract professionals and tourists. As other research notes, residents can be excluded on a cultural basis; for example, Dooling (2009, p. 630) notes how residents who are seen as economically unsuccessful “carry the symbolism and reality of being cast as outlaws, outcasts, dangerous criminals or pitiful (and disdained) victims”. Similarly, Kern (2015) examines how a polluted neighbourhood in Toronto redefined itself as “clean” by casting racialized bodies as “dirty” and then displacing, containing, or making invisible those bodies, such as by removing people who are homeless or sex workers for the purposes of neighbourhood revitalization. In Ottawa, a proposed congestion charge and increased street parking fees, as put forward in Energy Evolution, could be disproportionately financially burdensome and exclusionary to low-income

individuals. Energy Evolution proposes a ‘car free zone’ by 2030 in the ByWard Market and part of downtown Ottawa in front of Parliament Hill, areas that are highly popular for tourists. Drawing on Harvey (1989), the City’s plans for car-free neighbourhoods reflect the urban entrepreneurial strategy of creating *places* for tourists and investors rather than *territory* for local residents, given that there are many walkable neighbourhoods in Ottawa from which cars could be removed. Goossens et al. (2020) note that when the municipal government of Ghent, Belgium implemented ‘living streets’ in the port areas of the city, banning cars for a temporary period, long-term residents who tended to be working class and/or from a migrant background felt unwelcome and felt the neighbourhood’s identity was threatened (Goossens et al., 2020). In Ghent, living streets constituted gentrification through cultural and social displacement, rather than economic displacement, the authors concluded (Goossens et al., 2020). In a North American context, Glazener et al. (2022) describe how many New Orleans residents opposed a ban of cars from certain streets on the grounds that it would displace them from the neighbourhood. Locals argued that pedestrianization would benefit tourists more than residents by serving the neighbourhood’s businesses more than its residences; that pedestrianization would make it harder for lower-income locals to commute to the area for work; and that pedestrianization would increase traffic in adjacent areas (Glazener et al., 2022). Nevertheless, other residents argued that low-income individuals would benefit from reduced noise and pollution in their neighbourhoods (Glazener et al., 2022). In Ottawa, while tourism might benefit from a car-free zone, there is a high degree of homelessness in the ByWard Market (Shaw et al., 2015), a group who could be at risk of cultural and social displacement from pedestrianization policies that tend to attract and benefit higher-income groups. Introducing anti-poverty and housing strategies

could mitigate the negative impacts of car-free streets while maintaining their benefits for health, safety, the environment, and quality-of-life.

Finally, climate urbanism shifts attention to GHG emissions at the planetary scale, meaning residents become even less visible under climate policies compared to sustainability policies, which concerned themselves with the neighbourhood-scale (Long & Rice, 2019). Long and Rice (2019) highlight that the lack of attention to social concerns under climate policies is increasingly justified by a new sense of the moral imperative of climate action. Municipal climate urbanism adopts a ‘climate apocalypse’ narrative which prioritizes the protection of critical economic and physical infrastructure over avoiding the displacement and marginalization of vulnerable people (Long & Rice, 2019). This narrative portrays climate change as an urgent threat to humanity’s existence and displacement as an inevitable outcome of climate change, trivial in light of urgent threat to humanity (Long & Rice, 2019; Oels, 2013). This narrative justifies directing municipal resources towards securing economically-important infrastructure instead of protecting vulnerable people (Long & Rice, 2019). In line with the predictions of ‘climate urbanism’ (Long & Rice, 2019), the City’s contemporary policies indicate ‘climate apocalypse’ thinking. The Climate Change Master Plan conveys alarm over the current climate crisis but expresses hope due to the power to take action to protect the climate and the city and due to the availability of technological solutions to transition away from fossil fuels (City of Ottawa, 2020b, p. 3). Although the City acknowledges that “vulnerable populations” are more likely to be impacted by climate hazards, it indicates concern about its ability to respond to these populations after emergencies (City of Ottawa, 2020b, p. 24), and the City’s policies prioritize protecting infrastructure as much as vulnerable populations (see Section 4.4).

Given that the City of Ottawa has only recently adopted a climate urbanism approach, the socio-ecological implications of this approach remain to be seen. Case studies reveal the development and impacts of ‘actually existing sustainability’, which is sustainability policy that seek to improve the environment while advancing economic growth (Curran & Hamilton, 2012). Examining the implementation of the City’s environmental policies in specific cases reveals some of the social outcomes of these policies.

5.2. Case example #1: Herongate redevelopment

In recent years, Hazelview Investments, a global real estate firm, has undertaken a long-term project to redevelop a large portion of Herongate, an ethnically and linguistically diverse neighbourhood in the southern area of Ottawa. The planned redevelopment of Herongate demonstrates how a municipal government and a private investor negotiate and rationalize gentrification through sustainability, and increasingly, climate-related discourses. Furthermore, the Herongate redevelopment depicts how residents have resisted neoliberalization and proposed alternative solutions that can successfully influence municipal policy.

Hazelview Investments is a Toronto-based, multi-billion dollar ‘asset management’ firm that invests in, owns, and manages global real estate (Crosby, 2020). In 2012, Hazelview Investments bought seven rental properties in Herongate and has since evicted hundreds of renters from these residences, many of whom were racialized and low-income individuals (Crosby, 2020). According to the 2016 census, over 50% of residents in Herongate were newcomers to Canada, with large Haitian, Somali, Iraqi, Syrian and other communities in the neighbourhood (Government of Canada, 2017). Many Herongate residents identified as Black and Arab, and nearly half of residents identified a language other than French or English as their

first language (Xia, 2020). The median income of Herongate was less than half of Ottawa's median income (Government of Canada, 2017). Most residents in the neighbourhood rented their housing given that much of the neighbourhood was owned by social housing providers or private property managers like Hazelview (Xia, 2020). As Xia (2020) recounted, residents felt that the Herongate neighbourhood gave them a sense of community, familiarity, and belonging. Residents described how cultural similarities, shared experiences as newcomers to Canada, protection from the racism they experienced elsewhere in Ottawa, or social supports, such as childcare and food sharing, made them feel welcome in the neighbourhood (Xia, 2020). While Hazelview claims it evicted tenants due to poor conditions of the units, local residents and activists have argued that these highly-contested evictions were part of an intentional 'demoviction' strategy, in which Hazelview deliberately allowed units to fall into disrepair in order to evict low-income, racialized tenants and redevelop the units to be rented out at a higher price (ACORN Ottawa, 2021). Xia (2020) reported accounts from residents of Hazelview properties of poor treatment by the company. One resident recalled that Hazelview would delay making repairs by ignoring requests or claiming to have lost the paperwork (Xia, 2020). Another resident, whose mother tongue was Arabic, described how Hazelview staff acted as though they could not understand his English and did not offer to have the company's Arabic-speaking staff come speak to him (Xia, 2020). After the evictions, residents reported that the neighbourhood had changed and they felt the sense of community had weakened (Xia, 2020). Some evicted tenants were reported to have become homeless, while others moved to different cities to find affordable housing, or stayed in Ottawa and paid higher rent than before (Xia, 2020).

Hazelview intends to extensively redevelop the Herongate properties over the next twenty-five years, with plans to build over fifty new buildings, including 16 new towers, adding 4500

units to the neighbourhood (Crosby, 2020) (see Figure 2). Crosby (2020) has argued that reduced government spending in the housing sector has led the commodification and financialization of housing: by the early 2000s, private financial investors had come to see rental housing as a stable, long-term investment, and rental housing was transformed from being a social good to being a financial asset. Large financialized real estate investors have come to dominate the rental market in Canada, with apartment buildings considered to be one of the most reliable assets (Crosby, 2020). The financialization and commodification of rental housing demonstrates the demand for urban space to provide a ‘fix’ for capital, creating opportunities to deposit and extract profit from surplus capital (While et al., 2004).

Hazelview’s redevelopment of Herongate complied with the law—the evictions were legal under Ontario’s *Residential Tenancies Act*, which regulates evictions, and the company obtained the necessary municipal development permits (Mensah & Tucker-Simmons, 2021). The Herongate redevelopment required an amendment to the 2021 Official Plan to allow Hazelview to exceed density and building height maximums in the neighbourhood. When developers make applications to increase the density and height of buildings in a neighbourhood, the City seeks to negotiate benefits for the community (interview with City staff member C). The City was favourable towards the development application put forward but Hazelview’s consultants because its plans emphasized sustainability, such as through building design and extensive greenspace (interview with City staff member C). The redevelopment promises green and resilient buildings, water and wastewater conservation, space for community gardening, infrastructure for active transportation, and good urban design, with gradual height transitions and sightlines maintained along the streets (Heron Gate, 2019). The City worked with Hazelview



Figure 2. Hazelview Investments’ planned redevelopment of an area of Herongate. Adapted from City of Ottawa, 2021b.

to implement these policies through an Official Plan Amendment (City of Ottawa, 2021b), which exceeds the requirements of the 2021 Official Plan in some regards, such as for the amount of tree canopy cover to be provided (interview with City staff member B). Redevelopment plans for energy-efficient buildings and increased active transportation, public transit use, and car sharing will support climate mitigation and adaptation (City of Ottawa, 2021b). Additionally, the redevelopment will be subject to the upcoming Climate Resiliency Strategy and future development stages will be required to comply with the upcoming High Performance Development Standard (interview with City staff member B).

ACORN Ottawa, a union for low- and middle-income tenants, conducted substantial advocacy—including rallies, informational meetings, and media releases—to end tenant evictions, return units to evicted tenants, and provide affordable housing within the redevelopment (ACORN Ottawa, 2022). ACORN Ottawa declined to be interviewed as part of this research, but provided links to online press releases outlining its positions on the Herongate redevelopment. The union conducted organized numerous rallies and protests against the evictions taking place at Herongate. In response to ACORN Ottawa’s concerns, the City negotiated a memorandum of understanding (MOU) with Hazelview on affordability criteria for the redevelopment, such as higher-bedroom units to accommodate the high proportion of families in the neighbourhood (interview with City staff member B). The City had no policy or regulation that would require a developer to provide affordable housing units and the MOU represented the most affordable housing units the City had ever negotiated with a developer (interview with City staff member C). Provision of affordable units was negotiated in exchange for greater density allowances, and thus more units, which would allow their redevelopment to be more profitable (interview with City staff member C). The City undertook several

be more profitable (interview with City staff member C). The City undertook several consultations and visioning exercises with the public before amending the 2021 Official Plan, and organized for residents to discuss the proposed redevelopment with City staff with the assistance of a translator, given that approximately 40% of Herongate residents speak a language other than English or French at home (interview with City staff member C, Government of Canada, 2017). While some affordable units will be provided, and Hazelview has agreed to return some units to former evicted tenants at an affordable price, ACORN Ottawa has criticized these provisions as insufficient due to a lack of consensus on what should be considered an affordable rent price, and the fact that only more recently evicted tenants will be guaranteed units at this price (ACORN Ottawa, 2021). As a result of ACORN Ottawa's advocacy, the City has begun to examine the feasibility of an inclusionary zoning bylaw and anti-displacement policy intended to protect and increase affordable housing units (ACORN Ottawa, 2022). ACORN Ottawa demonstrates that local advocacy has been effective drawing attention to local injustices and has had some effectiveness at pushing back against neoliberalization and gentrification enacted through environmental policies.

The Herongate redevelopment illustrates the process through which municipal governments and the private sector act together to rationalize profit-making and displacement through sustainability and climate change measures. Crosby (2020) argues that Hazelview Investments, as a financialized landlord that uses property management of rental housing as a form of capital investment, is an active gentrifying agent driven by the "logics of finance capital" (p. 185), in which intensification of vacant or existing land is a key strategy for to achieving satisfactory profits. Hazelview needed the City to reconfigure social relations through an Official Plan Amendment in order to advance the firm's investment and profit-making strategy. At the

same time, City staff took advantage of an opportunity to advance sustainability and climate objectives, with few legal or regulatory tools in place to mandate lower rent prices in order to protect tenants. Though Herongate residents have borne the impacts of state-led financialization and privatization, local residents have also demonstrated that advocacy can successfully resist neoliberalization and achieve more just outcomes of sustainability and climate-related measures.

5.3. Case example #2: The People's Official Plan

The grassroots development of an unofficial and alternative Official Plan for Ottawa, called the People's Official Plan, both engaged with and contested the development of the City of Ottawa's new Official Plan, approved by City Council in 2021. The People's Official Plan demonstrates how grassroots policy-making can lead to new and different visions of climate urbanism, including visions for climate action that prioritizes social justice. By examining not just 'mainstream' climate policy, but also grassroots approaches to climate action, climate urbanism scholarship can identify alternative solutions that avoid the gentrification associated with municipal climate policy (Robin et al., 2020). These alternative expressions of climate action can reflect a socially transformative approach to climate urbanism in which climate action empowers residents, protects well-being, and redistributes resources (Robin et al., 2020). Furthermore, studying grassroots climate policies like the People's Official Plan sheds light on the influences of political pressures or interests on 'official' policy, specifically, in this case, from housing developers, and provide deeper insights into the function of municipal governments' public engagement during policy-making.

Urban sustainability researchers have demonstrated how advocacy by local residents, often those directly impacted by the gentrifying impacts of environmental policies on their

neighbourhoods, has led to the development and sometimes the implementation of novel policy solutions. As Pickerill (2021) notes in their study of grassroots infrastructure like eco-friendly housing collectives, grassroots organizing allows for risk-taking and experimentation that governments often avoid but that reveals the complexity, uncertainty, challenges, and possibilities associated with environmental action. In New York City, for example, long-time residents of Greenpoint, a historically working-class Brooklyn neighbourhood, organized meetings and organizations to clean up a contaminated waterfront while protecting industrial jobs in a historically working-class neighbourhood (Curran and Hamilton, 2012). The neighbourhood still experienced an influx of new residents, largely young professionals, and long-time residents collaborated with new residents to achieve a cohesive community vision that would improve the environment and protect local industry (Curran & Hamilton, 2012). New residents also brought political influence and attention to the cause by complaining about environmental contamination in the area (Curran & Hamilton, 2012). Furthermore, Greenpoint activists were able to harness state power to achieve environmental justice ends, such as through the City of New York maintaining Greenpoint's industrial zoning, federal government grants to support industrial jobs and environmental cleanup, and a successful lawsuit and settlement between Riverkeeper, an environmental organization, as well as the State Attorney General, against Exxon Mobil for an oil spill that occurred in the 1950s (Curran & Hamilton, 2012). According to the researchers, the 'just green enough' approach in Greenpoint was successful in part due to the collapse of the financial industry and real estate market in the United States in 2008, which meant the City was aiming to promote other industries to improve economic growth, and rezoning the area to residential would have been unprofitable at the time (Curran and Hamilton, 2012). Nevertheless, the 'just green enough' approach of Greenpoint residents

demonstrates how grassroots environmental action can create alternatives improving local environmental conditions without exacerbating gentrification (Curran & Hamilton, 2012).

The People's Official Plan is an informal coalition of 20 local advocacy groups in Ottawa that formed in 2019 to critique and influence the City of Ottawa's new Official Plan, as it was being developed, with the intention of influencing the City to take comprehensive action on climate change. The coalition's extensive activities involved meetings and workshops—many of which were attended by City staff—as well as submitting detailed written feedback throughout the Official Plan engagement process, and meeting with Councillors (interviews with coalition members A and B). The People's Official Plan provides a remarkably cohesive vision developed in a relatively short period, advocating a comprehensive vision of Ottawa emphasizing climate action alongside affordability and social justice (People's Official Plan, 2021). The coalition devised strategies related to improving walkability, housing affordability, greenspace, food security, municipal finances, and public engagement, alongside reducing GHG emissions (People's Official Plan, 2019). The People's Official Plan coalition criticized the lack of attention to social justice in the City's 2021 Official Plan, and the coalition advocated for social justice principles to be embedded throughout the 2021 Plan (People's Official Plan, n.d.). The coalition lobbied for the 2021 Official Plan to take a 'caring cities' approach, centring the needs of residents through a focus on social infrastructure and promoting affordable housing and food access and production (People's Official Plan, n.d.). The coalition argued the City should adopt an intersectional approach to justice, with greater attention to racial justice, reconciliation with Indigenous peoples, disability rights, and youth (People's Official Plan, n.d.). It called for the City to implement equity targets and indicators, such as to measure transportation access, as well as anti-displacement policies to protect affordable housing (People's Official Plan, n.d.). The

People's Official Plan connects climate action to social systems, arguing that natural infrastructure for climate mitigation should also promote food systems, recreation, and stewardship activities (People's Official Plan, 2021).

Though the People's Official Plan presented dozens of recommendations to the City of Ottawa to include in the 2021 Official Plan, the coalition members interviewed for this research differed in their views on the extent to which the City included their recommendations. One coalition member believed that City staff seriously considered the coalition's recommendations, and that the 2021 Official Plan incorporates many of the coalition's recommendations (interviews with coalition member A). Another coalition member believed the People's Official Plan had little influence on City staff and the final Official Plan (interview with coalition member B). A major criticism of the Official Plan was that it expands Ottawa's urban boundary, permitting new developments on greenspace, rather than through intensification within the existing urban boundary. Among its recommendations, the People's Official Plan presented a fully-developed urban intensification strategy that was consistent with the Province of Ontario's Provincial Policy Statement (interview with coalition member A). This strategy would have led to no expansion of Ottawa's urban boundary, as a means of reducing GHG emissions, protecting ecosystems and farmland, improving public health, and promoting public transit use. In the view of one coalition member, as a result of the coalition's advocacy, the City added an option in which no urban boundary expansion would occur, even though staff ultimately proposed the so-called 'balanced approach' of both intensification and urban expansion adopted in the final 2021 Official Plan (interview with coalition member A). The coalition member considered that political motivations had a large influence over the urban boundary expansion, stating "the balance on Council wasn't there" (interview with coalition member A). Another coalition

member believed the City's decision to expand the urban boundary was due to lobbying from housing developers who would benefit financially from the boundary expansion (interview with coalition member B). According to this coalition member, land outside the urban boundary purchased on speculation years ago would fail to reach its potential financial value unless the urban boundary was expanded (interview with coalition member B). This member also attributed the expansion to many City councillors receiving a large proportion of their political funding from housing developers (interview with coalition member B). This statement suggests that private housing developers have substantial influence over municipal policy and politics in Ottawa and that some residents recognize this to be the case.

The People's Official Plan endorses the overall guiding principles of the Official Plan but believes the plan will fail to achieve these goals due in part to the lack of implementation strategies in the Official Plan (People's Official Plan, 2021). For example, it states that the City's Energy Evolution strategy (City of Ottawa, 2020a) lacks explicit targets for achieving climate resilience and should include a plan for collecting and analyzing climate resilience data as part of zoning and bylaw development. A coalition member remarked upon discrepancies between the concepts outlined in the City of Ottawa's 2021 Official Plan, such as the climate lens, and the actual implementation of these concepts in the Plan's details (interview with coalition member A). The lack of implementation strategies indicates that the outcomes of the City's Official Plan will largely depend on program decisions made by staff.

The coalition demonstrated that residents and community groups have cohesive alternative visions to the climate urbanism being implemented in Ottawa. It reveals that many Ottawa residents seek climate action that centres a social approach, meeting the needs of residents in ways that reduce Ottawa's environmental impacts. Displaying a strong capacity for community

organizing in response ecological and social challenges, the People's Official Plan coalition challenges the notion of imminent societal collapse put forward in climate urbanism narratives, instead imagining societal transformation.

5.4. Chapter conclusion

This chapter presented real and potential social implications of the City of Ottawa's environmental policies. As demonstrated by Adamo (2012), in recent decades, the City has strategically applied sustainability arguments to justify private sector land-use intensification that contributed to housing costs. The redevelopment of Herongate by a private developer demonstrates that environmental gentrification is ongoing in Ottawa. Additionally, the City has recently introduced a range of measures to promote climate mitigation and resilience, such as building retrofit grants, a district energy system for federal government buildings, and electric vehicle charging stations. These measures may benefit homeowners, wealthier renters, and professionals. Influenced by social and environmental justice activism, like that undertaken by ACORN Ottawa and the People's Official Plan coalition, the City is undertaking measures to improve equity, like setting aside home retrofit loans for low-income individuals and conducting a feasibility study on inclusionary zoning of affordable housing units, a proposal put forward by ACORN Ottawa. The City also intends for land-use intensification to improve housing affordability by increasing housing supply and diversity in types of housing. Nevertheless, the City's contemporary environmental policies adopt the discourses that Long and Rice (2019) warn will rationalize displacement and marginalization.

Chapter Six: Conclusion

The City of Ottawa's environmental policies have put forward visions of a more liveable Ottawa, with compact neighbourhoods, accessible transportation, abundant greenspace, low pollution and GHG emissions, and protection from climate hazards. In the neoliberal political and economic context in which the City operates, these changes have helped to facilitate rising housing costs, displacement of residents, and entrenchment of private sector involvement in the provision of local services and infrastructures. The City's contemporary policies convey uncertainty about the future of Ottawa due to the threats posed by climate crisis, technological change, and an unstable global economy. What remains uncertain is how much longer society can continue to accommodate economic growth while externalizing its consequences to residents and ecosystems, in the present and future. These externalities are increasingly apparent as gentrification increases while GHG emissions have not declined and greenspace is increasingly lost in Ottawa. However, Ottawa residents have demonstrated many possible futures for Ottawa, and have developed promising alternative strategies to address environmental, economic, and social challenges facing the city. There is growing public demand for municipal environmental policies that lead to real socio-ecological transformation, rather than a compromise between environmental action and the need to increase private profits.

This thesis concludes with recommendations for municipal staff and local environmental advocates and by suggesting its possible contributions to scholarship on EPE, neoliberal cities, and climate urbanism. The remainder of this chapter then identifies possible future avenues of research that could lead to new insights for mitigating some of the negative impacts of environmental policies in the era of climate urbanism.

6.1. Key insights

This thesis examines the extent to which the City of Ottawa's policies in the 1990s and early 2000s were characterized by sustainable and climate urbanism approaches. Through an original coding protocol that identified the rationales and strategies in the City of Ottawa's environmental policy documents from 1990 to present, alongside historical research and interviews with City staff and local community groups, this research serves to validate the characterization of sustainable and climate urbanisms by Long and Rice (2019) as accurate predictors of municipal governance. This research also analyzed how municipal environmental policy is linked to political and economic circumstances at the national and regional levels of government. It found that in the 1990s, growing concern about environmental issues at the global, national, and local scales coincided with reduced government spending on social services and infrastructure (Young & McCarthy, 2009). Concerns about urban sprawl in Ontario led to provincial policies favouring municipal governance that advanced economic development and sustainability through 'Smart Growth' principles like promoting compact development and transit (Winfield, 2012). Consequently, the City of Ottawa's 1991 and 2003 Official Plans adopted sustainable development rationales that emphasized land-use intensification to create desirable, compact neighbourhoods to reduce GHG emissions and sprawl while attracting the labour force amidst an aging population. By the early 2000s, increased global concerns about climate change coincided with the 2008 financial recession, which ushered in decreased spending (Bojorquez et al., 2009) and anti-urban discourse (Budd, 2020) at the provincial level of government. At the same time, the federal government began increasing funding in response to growing concerns about deterioration of infrastructure and the fiscal challenges facing cities (Fanelli, 2014). Amidst growing fiscal challenges, the threat of climate change, and looming economic recessions, the

City of Ottawa has selectively drawn on the technical and accounting-based approaches of international climate science, such as those presented by the IPCC, and adopted new policies to advance climate mitigation, adaptation, and resilience. These strategies emphasize technological and infrastructure solutions like building retrofits, electric vehicle charging stations, and car-free zones funded through government grants and private sector investment. The City rationalizes these strategies as a responsible climate actor that can protect the capital within critical economic and physical infrastructures. At the same time, the City has maintained the sustainability measures and land-use intensification policies of earlier decades, now also highlighting the benefits of this approach for climate change. As predicted by an EPE perspective, the City of Ottawa's sustainable and climate urbanisms are mechanisms for neoliberalization, strategically restricting and guiding economic growth in directions that maintain capital's social legitimacy. This thesis argues that the City selectively applies environmental rationales and strategies to balance competing needs in a challenging political-economic context. EPE scholarship raises questions about the potential for sustainable and climate urbanisms to mitigate the environmental consequences of economic growth, given the work of EPE scholars in demonstrating that these consequences have always been externalized to different places and times (Dalby et al., 2012; Katz-Rosene, 2014; Laclau & Mouffe, 2001; Sandler, 1994). In Ottawa and other cities, neoliberalization has led to the financialization of housing, resulting in rising rent prices and the displacement of long-term residents (Adamo, 2012; Bunce, 2009; Checker, 2015; Kern, 2015; Teelucksingh, 2002). Whether climate urbanism improves or exacerbates social conditions will depend on its operationalization, with potential for increased attention to social justice in municipal programming. Case studies on the ACORN Ottawa's anti-displacement advocacy in regards to the Herongate redevelopment and the People's Official Plan's alternative vision for

Ottawa demonstrate how residents contest neoliberalization enacted through environmental policy. In the case of the Herongate redevelopment, residents resisted when the municipal government reconfigured planning processes to enable a private firm's profit-making in exchange for sustainable development. The People's Official Plan proposed feasible, comprehensive solutions for climate action that centres residents' needs over private sector profits. Ottawa residents and community organizations highlight that it is possible to resolve environmental problems while improving the social lives of urban residents.

Cities are continually shaped by interactions between social forces (Brenner, 2019). In Ottawa, residents are claiming their right to the city through collective efforts to reshape human-nature relations, such as through the vision of an ecologically- and socially-just city developed by the People's Official Plan coalition, or to more equitably distribute the benefits of urban development, as seen in ACORN Ottawa's calls for an anti-displacement strategy to protect tenants. Additionally, City staff have demonstrated their commitment to protecting the environment and improving the lives of residents affected by poverty and discrimination. These examples indicate the desire for change among urban residents.

Municipal staff could consider leveraging current trends of 'open government' and 'public participation' to achieve political buy-in for more transparent consultation processes for city policies and projects. To promote just decision-making, staff could publish all feedback with basic identifying information (while protecting individual anonymity) at various stages of the project or policy development process, along with a rationale for why the feedback was or was not incorporated. Municipal governments tend to focus on distributional justice—that is, the equitable distribution of benefits and costs of policies (Bulkeley et al., 2013). Participatory justice, the ability to be heard and to influence decisions, is an equally important aspect of

justice, and one that municipal governments tend to neglect (Bulkeley et al., 2013). A fair and robust consultation process can contribute to participatory justice.

Local environmental and social advocates might consider forming or strengthening coalitions based on common goals and priorities. Local groups can tend to advocate on specific local problems and projects, and without coordinating with each other or considering broader aims, groups risk working against each other. Advocacy may be more effective through a coalition that capitalizes on the achievements, resources, and knowledge of many groups with similar goals. A coalition could develop a common vision for the city, and an effective strategy could be to advocate for this vision consistently over the long-term, in an effort to shape the discourses of urban development before municipal consultations even begin. When developing a vision and goals, the perspectives and knowledges of equity-deserving individuals and groups should be prioritized in an effort to ensure successful advocacy would achieve more just outcomes. Environmental groups may consider involving a wider diversity of people and groups, like social issue groups, unions, and co-operatives. Putting forward an alternative vision of the city, endorsed by many different kinds of groups, could help to increase the legitimacy of this vision in the eyes of the public and politicians.

6.2. Future research directions

Future research on climate urbanism could further examine climate adaptation measures, implementation of climate policies, and socio-ecological impacts in different places and through different perspectives. Climate adaptation and resilience has received less attention than climate mitigation in the City of Ottawa's policies, and some possible questions related to Ottawa's climate resilience include: which communities and places in Ottawa are most vulnerable to

climate impacts? Whose needs are municipal climate resilience strategies best serving? How can urban climate resilience strategies support the resilience of species and ecosystems? There is also a need to understand how urban climate policies are implemented over the long-term (Juhola, 2020). More research is needed to address the social justice implications of local action on climate change (Bulkeley et al., 2013, 2014). Questions remain about how municipal governments, as well as non-governmental local actors, are incorporating social considerations into their climate policies. Examining grassroots environmental strategies could reveal new solutions and challenges and this research could also consider how the policy-making process neutralizes resistance from environmental activists (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019; Pearsall, 2018). There is also potential to gain insights by applying different theoretical lenses, like ecology (Pearsall, 2018), post-colonialism (Robin & Broto, 2021), or environmental justice (Pearsall & Anguelovski, 2016). Future research could focus on rural areas or cities in the Global South or the Global East, or non-state actors, which are less-studied areas within the field of municipal climate governance (Pearsall, 2018). Applying a variety of approaches and perspectives will identify policy measures that more effectively incorporate social-oriented goals in climate action and support community members in resisting environmental gentrification and displacement.

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CERTIFICAT D'APPROBATION ÉTHIQUE | CERTIFICATE OF ETHICS APPROVAL

Numéro du dossier / Ethics File Number

S-09-21-7324

Titre du projet / Project Title

Climate change, sustainability, and municipal policy: A case study of the City of Ottawa

Type de projet / Project Type

Thèse de maîtrise / Master's thesis

Statut du projet / Project Status

Approuvé / Approved

Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)

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Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)

01/03/2023

Équipe de recherche / Research Team

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Conditions spéciales ou commentaires / Special conditions or comments

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Bureau d'éthique et d'intégrité de la recherche

Le Comité d'éthique de la recherche (CÉR) de l'Université d'Ottawa, opérant conformément à l'*Énoncé de politique des Trois conseils* (2014) et toutes autres lois et tous règlements applicables, a examiné et approuvé la demande d'éthique du projet de recherche ci-nommé.

L'approbation est valide pour la durée indiquée plus haut et est sujette aux conditions énumérées dans la section intitulée "Conditions Spéciales ou Commentaires". Le formulaire « Renouvellement ou Fermeture de Projet » doit être complété quatre semaines avant la date d'échéance indiquée ci-haut afin de demander un renouvellement de cette approbation éthique ou afin de fermer le dossier.

Toutes modifications apportées au projet doivent être approuvées par le CÉR avant leur mise en place, sauf si le participant doit être retiré en raison d'un danger immédiat ou s'il s'agit d'un changement ayant trait à des éléments administratifs ou logistiques du projet. Les chercheurs doivent aviser le CÉR dans les plus brefs délais de tout changement pouvant augmenter le niveau de risque aux participants ou pouvant affecter considérablement le déroulement du projet, rapporter tout événement imprévu ou indésirable et soumettre toute nouvelle information pouvant nuire à la conduite du projet ou à la sécurité des participants.

University of Ottawa

Office of Research Ethics and Integrity

The University of Ottawa Research Ethics Board, which operates in accordance with the *Tri-Council Policy Statement* (2014) and other applicable laws and regulations, has examined and approved the ethics application for the above-named research project.

Ethics approval is valid for the period indicated above and is subject to the conditions listed in the section entitled "Special Conditions or Comments". The "Renewal/Project Closure" form must be completed four weeks before the above-referenced expiry date to request a renewal of this ethics approval or closure of the file.

Any changes made to the project must be approved by the REB before being implemented, except when necessary to remove participants from immediate endangerment or when the modification(s) only pertain to administrative or logistical components of the project. Investigators must also promptly alert the REB of any changes that increase the risk to participant(s), any changes that considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project or the safety of the participant(s).

Kim THOMPSON

Responsable d'éthique en recherche / Protocol Officer

Pour/For **Barbara GRAVES** Président(e) du/ Chair of the **Comité d'éthique de la recherche en sciences sociales et humanités / Social Sciences and Humanities Research Ethics Board**

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Appendix B: Interview Questions

English:

1. Why is it important that the City of Ottawa respond to climate change?
2. How did the concepts of mitigation, adaptation, and resilience come to play a key role in the City's climate change policies?
3. Why do the City's policies emphasize both sustainability and climate change?
4. Who are key partners for the City's planned climate actions?
 - a. *Follow-up:* What actions did the City take to get this partner on board with the City's climate change plans?
 - b. *Follow-up:* What future actions is the City planning to take to engage these partners?
5. What is the biggest barrier to the City achieving its climate change goals?
 - a. *Follow-up:* Why do you consider this a barrier?
6. What has been the City's biggest success on climate change to date?
 - a. *Follow up:* Why do you consider this a success?

Français :

1. Pourquoi est-il important que la Ville d'Ottawa réponde aux changements climatiques?
2. Pourquoi les concepts d'atténuation, d'adaptation et de résilience sont-ils inclus dans les politiques de changement climatique de la Ville ?
3. Pourquoi les politiques de la Ville incluent à la fois la durabilité et le changement climatique ?
4. Quels sont les partenaires clés des actions climatiques envisagées par la Ville ?
 - a. *Suivi :* Quelles actions la Ville a-t-elle entreprises pour se collaborer avec ce partenaire sur les changements climatique ?

- b. *Suivi* : Quelles actions futures la Ville envisage-t-elle de prendre pour se collaborer avec ces partenaires ?
- 5. Quel est le plus grand obstacle à la réalisation des objectifs de la Ville en matière de changement climatique ?
 - a. *Suivi* : Pourquoi considérez-vous cela comme un obstacle ?
- 6. Quel a été le plus grand succès de la Ville en matière de changement climatique à ce jour ?
 - a. *Suivi* : Pourquoi considérez-vous cela comme un succès ?