



Cities, Climate Change and the Green Economy: A Thematic Literature Survey

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Abstract

This working paper constitutes an extensive review of the literature concerned with exploring the role of cities in addressing climate change and green employment creation. It identifies five key areas for discussion: (1) greening the local economy; (2) shifting local policy roles and trends in urbanization; (3) policy learning and cross-jurisdictional collaboration; (4) the place of civic participation and engagement; and, (5) the co-benefits of a green economy. These areas will be addressed in an effort to critically explore the following questions: What impacts do cities have on climate change? What role are cities currently playing with regards to the development and implementation of climate change and green economic policies? What barriers do cities face with regards to developing and implementing climate change and green economic policies? What potential is there for policy development?

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Introduction

Climate change is a pressing policy issue that poses immediate and long-standing impacts to the social, physical and economic environment. Over the years, policies and programs that strive to mitigate climate change and promote green economic development have demanded greater recognition on the institutional and political agendas. The literature illustrates that mitigating climate change requires effective policy action from all levels of government – innovation and collaboration are key. However, rising rates of urbanization, rapid population growth and deteriorating environmental sustainability have refocused the climate change lens, challenging traditional understandings of how governments respond to such pressing environmental concerns (Schreurs 2008; Corfee-Morlot, et al. 2009; Bai 2007).

While climate change policy is often conceived as merely an environmental matter, research highlights that climate change is an intricate intersection of multiple social, economic, political and cultural issues (Gore 2010; Demerse 2011). An analysis of current and emerging climate change trends reveals that there has been a shift in the role that different levels of government play in addressing climate change issues (Forstater 2004; Bulkeley 2011). For instance, governments at all levels have begun to recognize the economic development opportunities in a green economy (Demerse 2011; Duffy and Fussell 2011). Further, with the movement to greater horizontal and porous decision-making, and the shift from government to governance approaches, a dialogue on the prime role of cities in mitigating climate change has been initiated (Corfee-Morlot, et al. 2009). With limited constitutional authority, cities, in the Canadian context, are often viewed as powerless and the least influential level of government. However, this is far from the on-the-ground reality (Courchene 2007; Toly 2008; Bradford 2002).

Globalization has greatly influenced both the issue of climate change itself and the manner in which governments respond to it (Toly 2008). By fragmenting power and levels of authority, globalization has allowed for the issue of climate change to be ‘localized’, hence, making way for cities to assume larger and more influential roles in the policy development process (Toly 2008). Climate change poses severe challenges for policymakers. The irreversibility and other risks associated with deteriorating environmental conditions, including its negative effects on public health and the civic economy & society, has prompted many cities to take a lead role in the development and implementation of climate change mitigation policy and in exploring opportunities for developing greener local economies (Corfee-Morlot, et al. 2009: 16-18).

“Despite...initial progress and continually growing action at the municipal level, there still remains widespread uncertainty about what precise role Canadian municipalities can take in responding to this issue, and more importantly, about what barriers municipalities face in trying to respond...there remains little written about the specific barriers Canadian municipalities did, do, and will face in making a purposeful contribution to the reduction of greenhouse gases [and to build a local green economy]” (Robinson and Gore 2005: 104)

Following an extensive review of the literature, five key areas of discussion have been highlighted in this paper: (1) greening the local economy; (2) shifting local policy roles and trends in urbanization; (3) policy learning and cross-jurisdictional collaboration; (4) the place of civic participation and engagement; and, (5) the co-benefits of a green economy. These areas will be addressed in an effort to critically explore the following questions:

1. What impacts do cities have on climate change?
2. What role are cities currently playing with regards to the development and implementation of climate change and green economic policies?
3. What barriers do cities face with regards to developing and implementing climate change and green economic policies?
4. What potential is there for policy development?

Greening the Local Economy

A review of the literature reveals that ‘going green’ is not synonymous with ‘greening the local economy’, a critical distinction in a discussion of the economic development opportunities in a low carbon, green economy. Whereas ‘going green’ is often associated with items such as recycling and reduction, ‘greening the economy’ refers to the integration of policies concerning economic development and the mitigation of climate change (McBride, Shields and Tombari 2012; University of Guelph 2013). Further, ‘going green’ is a term used to describe a set of environmentally conscious behaviours or actions, whether taken by individuals, organizations and governments, that aim to reduce consumption and one’s overall carbon footprint (Go Green 2011). A ‘green economy’ strives, “...to unite under a single banner the entire suite of economic policies and modes of economic analyses of relevance to sustainable development. In practice, this covers a rather broad range of literature and analysis, often with somewhat different starting points” (United Nations 2011). In other words, a green economy seeks to build strong economic sustainability that supports green technology, green jobs, green engineering and green consumption.

“Green growth means fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies.”
(OECD 2012: para. 2)

Burkart (2009) notes that there are six pillars of a green economy, including: 1) renewable energy; 2) green buildings; 3) clean transportation; 4) water management; 5) waste management; and, 6) land management. Drawing upon Burkart’s (2009) six pillars, it is evident that local governments have a direct influence on policy development and program implementation in a number of the aforementioned areas. Moreover, ‘green jobs’ are defined throughout the research as those activities, whether manufacturing, administrative, technical or service-related, that strive to preserve, enhance and/or restore environmental equality through efficient and sustainable initiatives (Worldwatch Institute 2008). For its part, the U.S. Bureau of Labor Statistics uses a two-fold understanding

when defining ‘green jobs,’ including those that either lead to the production of green services/goods and/or those that utilize environmentally sustainable processes (Bureau of Labor Statistics, n.d.).

Corfee-Morlot et al. note that there are different institutional models that can guide climate change policy development (2009: 49-57). Firstly, nationally or regionally led frameworks with a traditional ‘top down’ approach utilize national policy to influence locally sustainable economic development initiatives. Nationally and regionally led frameworks often require governments to establish broad overarching frameworks and policies designed to guide and influence local action. This institutional model often involves national governments setting price signals, for instance through carbon taxes, to encourage investment in environmentally sustainable options. Further, locally led frameworks, which encourage learning from the ‘bottom up’, utilize learning and experience from the local level to steer policymaking at national and/or regional levels (Corfee-Morlot, et al. 2009: 49-57; also see: Katz and Bradley 2013).

Within this model, the local voice is crucial for the successful and sustainable implementation of policies and programs that strive to green the local economy (Corfee-Morlot, et al. 2009: 59-57, 63-65). The exclusion of citizens can lead to resistance and inhibit the affectivity of local, regional and/or national climate change mitigation strategies (Portney 2005). Moreover, hybrid models, including multilevel action and public-private partnerships, encourage experimentation and creativity with regards to developing climate change mitigation strategies. As a tool to assist governments to achieve climate change mitigation targets, hybrid models guiding policy action on climate change have increasingly included an enhanced role of the private sector to control international and national carbon markets (Corfee-Morlot, et al. 2009: 49-57).

Why Cities?

Climate change is traditionally thought of on a national and a global scale. However, as the level of government closest to the citizenry, cities are regularly faced with the immediate and long-standing effects of climate change (Thompson and Joseph 2011; Bai 2007; Bulkeley 2000). As a result, cities must begin to take the lead on developing a green economy through the creation of green jobs and green policies. For instance, the C40 Cities Climate Leadership Group, a global network of dedicated cities, highlights the ability of cities to lead the development of climate change policies at the local scale (Bulkeley 2011; Miller 2012; C40 Cities Climate Leadership Group n.d.). Mayor Michael R. Bloomberg of New York City, a member city, for example, contends that:

“There is a special need to focus on cities because, how cities develop will determine our ability to deliver a low-carbon, climate resilient future and thus the pursuit of sustainable economic development across the OECD and worldwide.” (Corfee-Morlot, et al. 2009: 13)

“While international negotiations continue to make incremental progress, C40 Cities are forging ahead. Collectively they have taken more than 4,700 actions to tackle climate change, and the will to do more is stronger than ever. As innovators and practitioners, our cities are at the forefront of this issue – arguably the greatest challenge of our time” (As cited in Cities Climate Leadership Group n.d.).

The literature reveals that investments in the green economy provide both direct and indirect economic benefits, including stimulation of the local economy and the encouragement of job growth (Bulkeley 2011; Toly 2008; Corfee-Morlot, et al. 2009). Additionally, Thompson and Joseph note that investment in the green economy directly correlates with increased economic vitality and employment. A \$550 million Green Municipal Fund was endowed to the Federation of Canadian Municipalities to stimulate capital investment projects that advance locally sustainable green initiatives providing economic spinoffs (2011: 15). To date, however, few Canadian cities actively pursue policies that successfully foster both green economic growth and increased employment (McBride, Shields and Tombari 2013).

In an examination of cities and climate change a discussion of trends in urbanization is critical, as it provides an opportunity to illustrate not only why cities are significant to climate change policy, but also why local involvement is imperative to the future development of green economic policies. Current urban trends highlight that the role of cities in relation to climate change is difficult, if not impossible, to ignore (Siemens 2011; Schreurs 2008; Forstater 2004). Cities are more than places to live; they are key drivers of the economy, centres of population growth and some of the largest contributors to the emission of pollution and greenhouse gases (Miller 2012). The research suggests that cities contribute anywhere from 50% to 70% of greenhouse emissions, both nationally and internationally (Gore 2010: 27-28; Betsill and Bulkeley 2006). Similarly, research

“Municipalities are both the engine of the Canadian economy and the place where most of the solutions for Canada’s pursuit of a green economy reside. From a practical standpoint, municipalities operate closest to the people and can place green economy policies in a tangible context that visibly displays their benefits, helping generate political support for policy change.” (Thompson and Joseph 2011: 3)

conducted by Schreurs indicates that, “...cities alone consume approximately three fourths of the world’s energy and produce about 80% of anthropogenic greenhouse gas emissions” (2008: 346). Equating the City of London to the countries of Greece and Portugal, Bulkeley reveals that current urbanization trends in mega-cities are now emitting higher levels of greenhouse gas emissions than certain nation-states (2011: 464-465). In addition, the literature indicates that the world’s population is increasingly residing in highly urbanized centres. The United Nations projects that by 2030 an estimated 60% of the global population will live in urbanized areas.

Whereas 9% of the global population lived in very highly urbanized centres in 2009, increasing rates of immigration, urban growth and economic development leads researchers to suggest that this will rise to 12% by 2023 (Corfee-Morlot, et.al. 2009: 13-16).

It is important to note that climate change policies do not operate in isolation; rather, they are co-related with numerous policy areas, including transit, land-use planning and growth management (Kousky and Schneider 2003; Robinson and Gore 2005; Thompson and Joseph 2011). The Federation of Canadian Municipalities argues that cities have access to a number of levers, which allow them to tackle climate change in an effective and efficient manner (Thompson and Joseph 2011: 3-4). Accessing what Thompson and Joseph refer to as the ‘municipal policy toolkit,’ cities can take action in a number of areas, including efficient transportation planning, effective waste management, sustainable construction and water conservation (2011: 3-5). Energy efficient retrofits, energy conservation and sustainable water management, for instance, are policy areas that cities have a direct hand in controlling and managing. Utilizing various levers, including user fees, property tax exemptions and zoning policies, cities can support green economic development (Thompson and Joseph 2011: 3-5; Robinson and Gore 2005). As Forstater argues, however, in order for cities to actively pursue green economic development policies and programs the ‘jobs vs. the environment’ narrative must be challenged (2006: 58). Thus, Forstater proposes the creation of a Public Service Employment programme that promotes economical sustainability, environmental education and a ‘learning by doing’ culture (2004: 57-59).

While climate change policy is traditionally viewed through the provincial or national lens, now more than ever it is critical to take a local perspective to examine what cities have and can do to combat climate change and to promote green economy initiatives. As climate change and other environmental concerns become more severe and the challenge of sustainable economies loom ever larger, the role that cities can play in developing policies to address these issues becomes highly significant and necessary. Trends in urbanization highlight that cities are increasingly becoming some of the largest contributors to global environmental concerns. Consequently, if left unchecked, rapid rates of urbanization will continue to lead to surmounting environmental decline that may be difficult, if not impossible, to mitigate (Corfee-Morlot, et al. 2009; Robinson and Gore 2005). The rescaling of civil society and increasing decentralization means that global issues, such as climate change and green economic alternatives, are now increasingly ‘local’ (Toly 2008: 342-343).

There are a number of key environmental policy instruments available to municipalities to foster structural change with regards to greening the local economy (Angelove 2001: 248-253; Thompson and Joseph 2011; Schreurs 2008). For instance, regulations (i.e., emission limits), information/knowledge (i.e., communication strategies) and voluntary agreements are all measures that can simultaneously promote climate change mitigation and economic growth (Angelove 2001: 248-253). However, it is critical to note that there is no ‘one size fits all’ approach to addressing climate change and a green economy at the local, regional and national levels (Robinson and Gore 2005).

Regulations generally come with significant enforcement costs but the long and medium term costs of inaction on these issues are much higher. Information/knowledge and voluntary agreements are preferable policy options when transnational collaboration is necessary or when an information gap requires closing. There is, however, very often

limited information available regarding best practices and the actual success rates of voluntary measures (Angelove 2001: 248-253).

The literature reveals that further research is required to fully explore the role that cities can play in addressing climate change and green economic growth. But based on the work that does exist Gore argues that: “The network of Canadian municipalities engaged in climate change activities holds characteristics that in theory should result in more influence on national climate policy, but in practice, this is not the case” (2010: 29). So, we must ask ‘Why?’ Frequently viewed as “policy-takers, not policy-makers,” the ability of municipalities to develop, implement and monitor climate change policies and green economic development is often negated or undermined (Gore 2010: 28-30). Municipalities in Canada are seen as creatures of the provinces with limited formal and legal powers. Having a direct hand, however, in coordinating and managing issues such as transit/transportation, zoning, land-use and planning, cities have the ability to refocus the issue of climate change (Gore 2010: 31-34; Thompson and Joseph 2011; Kousky and Schneider 2003). Discussing the importance of municipal networks, Gore comments:

“By engaging citizens in local policies and programs focused on climate issues and working within national and international municipal networks, it may be that municipalities have the potential to exert national influence from ‘below and above’ nation-states. That is, in the presence of weak national climate action, municipal action may inspire citizens to support or demand policy change at a national level; or, following the boomerang like model of how transnational advocacy networks function...[N]ational or transnational municipal climate networks may, in theory, gain international attention that results in national pressure for change. Yet, to date, research has not clearly demonstrated these potentials” (2010: 35-36).

Despite numerous studies that have been completed on the politics of climate change, limited research on the role, abilities and effects of local climate change and green economic, including green employment, policy are available (McBride, Shields and Tombari 2013; Gore 2010; Corfee-Morlot, et al. 2009). This paper is a call for action to recognize the evolving and expanding role of cities in the battle against climate change but showing how it needs to be linked to local green economic strategy.

As previously discussed, green policy initiatives have often been viewed as an issue warranting national or supranational jurisdiction (Portney 2005; Betsil and Bulkeley 2006; Bulkeley 2011). However, while many nation-states were opting for a national approach during the Kyoto negotiations, Australia took a decentralized approach. Australia maintained the importance of the role of the local government in decision-making and achieving targets (Bulkeley 2000: 289-290). Echoing the importance of local involvement in climate change policy Bulkeley notes:

“Chapter 28 of *Agenda 21*, signed at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, called for every local government to create its own agenda for sustainable development. The rationale being that ‘as the level of governance closest to the people [local authorities] play

a vital role in educating, mobilizing and responding to the public to promote sustainable development” (2000: 290).

In addition, some scholars go as far as to argue that the local level is the only one at which sustainability can realistically be enacted. However, while it is critical to acknowledge the important role that cities can play in pushing forward green policy change, this should not come at the expense of eroding the key role for other levels of government and of intergovernmental collaboration (Bulkeley 2000: 290-293).

Numerous cities have policies and programs aimed at mitigating climate change and supporting economic growth but such initiatives are often developed in ways that make them separate and distinct from one another. A green economy strives to realize the synergies of combating climate change and economic development (McBride and Shields 2013; Lipsig-Mummé 2013; Angelove and Johansson 2011; Bulkeley 2011). Through the recognition of the co-benefits of a green economy, cities have the opportunity to lead the future of climate change policy development (Miller 2012). Additionally, cities have a multitude of policy levers available to them, making them critical players in global efforts to mitigate climate change (Thompson and Joseph 2011: iv, 17-18; Corfee-Morlot, et al. 2009). As the level of government with a direct hand in items such as transportation, land-use planning, zoning and water services, cities have a unique and meaningful role in the movement towards a green economy (Thompson and Joseph 2011; Betsill and Bulkeley 2006: 143).

The work of Corfee-Morlot, Kamal-Chaoui, Donovan, Cochran, Robert and Teasdale identifies that decision-making at the municipal level is extremely important for three reasons (2009: 45-49). Firstly, the manifestations of the effects of climate change are increasingly at the local level, impacting municipal livelihood, as well as local economic and social health. Secondly, the authors argue that vulnerability and adaptive capacities are influenced by local conditions. Lastly, they maintain that adaptation initiatives should be implemented at the local level, as that is where decisions about livelihood and investments are driven (Corfee-Morlot, et al. 2009: 45-49).

Thompson and Joseph contend that municipal action and investment in greening the economy should be guided by three key principles: act locally, value for money, and work with the market (2011: 5). Working with the market does not mean that there is not a key role for the state in managing green economic development strategy or that pure market forces should dominate in the decision making process around green growth.

A report by the Federation of Canadian Municipalities notes that cities can play an influential role in mitigating climate change and

“Being on the front line of key environmental challenges – such as those related to transportation, sprawl and the quality of building stock– we [municipalities] are best-placed to identify challenges and formulate solutions. Municipal governments tend to be less partisan and less prone to ideological gridlock; we get things done. Finally, in many important areas (e.g. land use), it is local government that has the jurisdiction to take action”
(Thompson and Joseph 2011: 3).

supporting economic growth through effective transportation planning and the implementation of climate resilient infrastructure. However, the authors observe that value for money must be a top priority with regard to investments and in particular those investments in infrastructure (Thompson and Joseph 2011: 5). When guided by the three principles stated above, Thompson and Joseph (2011) claim that local green economic development strategies can lead global climate initiatives.

Policy Learning and Cross-Jurisdictional Collaboration

Inspiring action through a bottom-up approach, cities can take action where other levels of government have experienced unsuccessful policy interventions or failed to act all together (Toly 2008: 342-343). The literature highlights that policy learning and cross-jurisdictional collaboration is critical as cities move forward in addressing climate change and green economic development (McBride, Shields and Tombari 2013; Bulkeley et al. 2003; Portney 2005). In a discussion of sustainable economic policy development, McBride, Shields and Tombari (2013) note that horizontal policy learning and the sharing of best practices are fundamental first steps for cities taking on this increasingly large policy role. Shifting away from hierarchical models of statecraft, sustainable economic policy development demands the promotion of horizontal modes of decision-making that involves all levels of government and sectors of society (Forstater 2004; Forstater 2006; Betsill and Bulkeley 2004: 474). Within the shift from ‘government to governance’ we have witnessed a movement towards non-traditional models of governance, which has allowed for influential networks to develop, both formally and informally (Corfee-Morlot, et al. 2009: 80-82; Betsill and Bulkeley 2006).

Transnational municipal networks (TMNs) allow cities to develop creative and innovative policy solutions to complex problems such as climate change (Toly 2008; Betsill and Bulkeley 2004). Promoted in regions such as the European Union, transnational municipal networks provide a forum and platform for global horizontal policy learning (Betsill and Bulkeley 2004; Betsill and Bulkeley 2006). Bulkeley and Kern (2009) maintain that the emergence and existence of transnational municipal

“Within Europe commentators have identified a shift from government to governance, or from a more linear, state-dominated political system to one which involves non-hierarchical relations between a dense web of state and non-state actors.”

(Bulkeley, et al. 2003: 237)

successful and unsuccessful initiatives targeting climate change and other green initiatives.

networks is a clear indication of a movement towards multi-level governance where policy arenas are overlapped and intertwined. Also, within a multilevel governance framework no nation-state holds a monopoly on policymaking, hence, increasing opportunities for intergovernmental coordination and the sharing of best practices (Bulkeley, et al. 2003: 237-250). While best practices may not translate perfectly to other jurisdictions, horizontal and cross-jurisdictional policy learning allows cities to draw upon both

Bulkeley et al. contend that transnational municipal networks are able to effectively engage in the policy process for a number of reasons, including, but not limited to, their ability to: act as implementation agencies, lobby higher levels of governments, promote local policy initiatives, and disseminate information and best practices. The authors importantly point out that policy learning in relation to the work of transnational municipal networks cannot be thought of as merely the transmission of information. Rather, such policy learning is a discursive process that provides municipalities with the opportunity to reframe issues in a manner that reflects local issues and needs (2003: 247-250).

Highlighting the importance of intergovernmental and cross-sector collaboration, Betsill and Bulkeley discuss the Cities for Climate Protection (CCP) program, a network of approximately 650 local governments internationally striving to mitigate climate change (2004: 471-472); within Canada under the banner Partners For Climate Protection some 240 municipalities are member of CCP (Partners For Climate Protection n.d.). Promoting network and policy learning, the CPP program allows cities to share information on best practices regarding green economic development policies, which offer the co-benefits of combating climate change and strengthening the local economy (Betsill and Bulkeley, 2004: 477-478). Regarding this network Betsill and Bulkeley observe:

“The CCP program is premised on the assumption that while the efforts of any single local government to reduce greenhouse gas emissions may be relatively modest, by working together local authorities can make a significant contribution to efforts to mitigate climate change. Cities, it is suggested in the literature, are key sites in the production and management of energy use and waste production, through processes over which local authorities have a (varying) degree of influence. Local authorities can regulate, advise, and facilitate action by local communities and stakeholders, and have considerable experience in addressing environmental impacts within the fields of energy management, transport, and planning, and many have already undertaken innovative measures and strategies to reduce their impact on climate change” (2004: 477).

The reason why cities can and need be key players in the promotion and development of climate change policy is because with high and growing rates of urbanization, cities have and will continue to be some of the largest greenhouse gas emitters, waste producers and energy consumers in the globe. But as the order of government closest to the citizenry, local governments have already begun addressing environmental issues through items such as transport planning (Betsill and Bulkeley 2006: 143). As a result, uncovering and capitalizing on the synergies of work already underway at the local level can provide cities with the opportunity to become leaders in the effort to green the local economy.

Corfee-Morlot et al. argue that, as a framework for understanding climate change, multilevel governance has two interacting dimensions of influence - vertical and horizontal. Intergovernmental action on climate change is not only desirable it is necessary for the development and implementation of effective climate change policies, particularly at the municipal level. Certain climate change initiatives cannot be implemented without the effective collaboration of local, regional and national levels of

government, thus, highlighting the importance of vertical collaboration (Corfee-Morlot, et al. 2009: 24-27; Toly 2008). Legal issues, for example, are often ‘nested’ in frameworks managed by higher levels of government requiring local, regional and/or national governments to collaborate and coordinate social, economic and political resources. However, it is important to note that local policies and initiatives may enable or constrain action at the national level and vice versa (Corfee-Morlot, et al. 2009: 24-27).

The horizontal dimension of multilevel governance highlights the importance of horizontal policy learning, information sharing and transnational networks. Over the years there has been an increasing emergence of transnational networks, where cities have the power to influence outcomes at the national and international scales. Horizontal relationships/collaboration, both formal and informal, forged between cities and regions have enacted a dialogue about the role of cities in mitigating climate change (Corfee-Morlot, et al. 2009: 24-27; Toly 2008). ICLEI’s Cities for Climate Protection, the Climate Alliance, the C-40 Large Cities Climate Leadership Group and the U.S. Mayors Climate Protection Agreement, are examples of local transnational networks striving to mitigate climate change and promote green growth alternatives (Corfee-Morlot, et al. 2009; Gore 2010; Toly 2008). Additionally, while the role of local government is essential for the effective implementation of sustainable economic development initiatives, municipalities are ill-equipped to act alone; therefore, cities must work closely with the private sector, local NGOs, citizen-led organizations, non-governmental actors, as well as other levels of government (Corfee-Morlot, et al. 2009: 77-80; Gore 2010; Portney 2005).

Civic Engagement and Participation

The role of civic engagement and participation are particularly important in a discussion of cities and green economic development. A movement away from traditional hierarchical modes of governance requires recognition that climate change mitigation and green economy policy cannot solely be a top-down endeavour. Citizenry must be an active and willing partner in greening the economy. Citizens are

contributors of greenhouse gas emissions, but are also directly impacted by the effects of environmental deterioration. Citizens are consequently in a unique position to participate in climate change mitigation and other green initiatives (Portney 2005). As Brody et al. note, however, two variables influence the level of civic participation regarding environmental causes in cities; namely the percentage of the population that are ‘affluent’ or solidly ‘middle class’ incomes, and the percentage of the population with a postsecondary education. More prosperous (and economically secure) and educated individuals are more apt to be sympathetic to and engaged with environmentally friendly issues and public policies (2008: 452-459; Inglehart 1977).

“Community participation acknowledges that the practice of sustainable development is dependent on the involvement of communities at the local level” (Verrinder 2011: 195).

Regions that are the largest contributors to greenhouse gas emissions are often the least likely to participate in climate change initiatives. Consequently, incentives (i.e. financial tax incentives, cost sharing programs) and increased environmental awareness campaigns are necessary in order to stimulate civic participation (Brody, et al. 2008: 468-471). The local voice is crucial for the successful and sustainable implementation of policies and programs, as civic participation can lead to creative and more responsive decision-making, whereas the exclusion of citizens can lead to resistance and inhibited affectivity (Corfee-Morlot, et al. 2009: 63-65; Portney 2005). Outreach and education efforts increase awareness, thus potentially motivating civic and state action. Kousky and Schneider note that through civic engagement and empowerment, cities can achieve a form of policy success that national and international policymakers are unable to achieve alone (2003: 369-370).

Civic participation can bring policies to life. Portney notes that the increased role of cities in mitigating climate change leads to enhanced public participation, an essential element of the effective and sustainable implementation of climate change policies. While in the 1960s and 1970s cities were considered ill-suited to address the issue of climate change, international attention started to be paid to the role cities could play in addressing environmental issues during the 1980s and 1990s (2005: 579-580). The research reveals that the local level is one of the most appropriate and effective for implementing economic development initiatives aimed at greening the local economy (Portney 2005; Thompson and Joseph 2011; Schreurs 2008). Increased public participation is essential for the sustainability of climate change policies and initiatives in cities. Combating climate change is a journey that requires sustainable and long-term commitment on the part of cities.

Portney explores the role of civic participation in sustainable city efforts to mitigate climate change, arguing that civic engagement plays two distinct roles in the process of greening the local economy. Firstly, in order to develop sustainable economic development initiatives that simultaneously mitigate climate change, civic consultation is essential. Secondly, enhanced civic engagement is an integral part of the process of greening the local economy. With civic participation integrated as a key pillar of climate

“The reason why citizenship is such an important issue in environmental politics is that moving towards a ‘sustainable society’ (or a less unsustainable one) will require fundamental changes in how people live together and distribute resources to meet their needs. These are ultimately political questions. Unless we want a Leviathan-style authoritarian ruler to come along and ‘save us’ ... it will be necessary to involve citizens democratically in the process of change” (MacGregor 2011: 273).

change initiatives, cities that have embraced sustainable economic initiatives early on in the process (i.e. Seattle and Portland) have been greatly successful (2005: 583-585).

Civic engagement can assist with ensuring that climate change is a top priority on the political and policy agendas (Portney 2005; Toly 2008). For instance, strong public reaction, whether positive or negative, towards any policy matter is fundamental to garnering the attention of elected and agency professionals (Portney 2005: 583-585). Research reveals that initiatives influenced by civic participation can generate long-term

efficiency, effectiveness and sustainability, as policies and programs are often more attuned with local needs (Portney 2005; Thompson and Joseph 2011). Also, engagement and consultation can raise civic consciousness, and thus play an important role in shaping behaviour. However, when dominant social, cultural, economic and political values are resistant to change, public interest can diminish, thus hampering the success of sustainable economic development initiatives in cities. In order to challenge the status quo, cities must effectively stimulate political will. Lastly, Portney argues that at the most fundamental level sustainable economic development is about community and the relationship between residents and their environment. Communitarian in nature, building sustainable communities while promoting economic growth is a project aimed at influencing the choices, actions and decisions made in civil society (2005: 583-585).

Co-Benefits of a Green Economy

There are numerous direct and indirect co-benefits to greening the local economy, including climate change mitigation, reduced levels of greenhouse gas emissions, energy conservation, improved community health, an enhanced sustainable economy, climate resilient infrastructure and efficient land-use planning (Corfee-Morlot, et al. 2009: 20-22; Thompson and Joseph 2011). Further, while green policies have numerous indirect spinoff effects on various socio-economic policies, the reverse is also true (Corfee-Morlot et al.: 20-22). For instance, policies and programs that strive to improve community health or enhance community education may also have indirect spinoff effects, whether positive or negative, on climate change mitigation (Corfee-Morlot, et al.: 20-22; Thompson and Joseph 2011). The challenge for local governments is to harness the positive co-benefits of policies in attempts to enhance economic growth and mitigate climate change by sustainably and effectively governing the social, economic and cultural landscape.

"Whether the recognition of co-benefits encourages higher levels of abatement or just allows cities to claim climate benefits for policies that would have been undertaken for the co-benefits alone is difficult to judge" (Kousky and Schneider 2003: 369).

Harnessing the co-benefits of green economic policies requires effective and coordinated public and stakeholder engagement. Education and outreach initiatives can serve as a means of raising awareness about the importance of green policies, and as a result, carries the potential to motivate civic and state action. Also, the ancillary benefits of climate change mitigation strategies can be utilized by local governments to 'localize' climate change issues that are traditionally examined through a 'global' lens (Kousky and Schneider 2003: 367-369). The localization of climate change issues can assist municipalities with justifying new policies, programs and initiatives, while providing a policy window opportunity to tackle multiple critical policy issues at once. The public does not always initially respond to large-scale global concerns. However, taking an increasingly local approach on environmental issues allows individuals to understand the impacts of climate change at an increasingly granular level. The research confirms that

for climate change policies to be successful they must be translated into local issues that are viewed as pressing and significant (Bulkeley 2000: 300-304).

The work of McBride, Shields and Tombari (2013) contend that growing the green sector opens up the possibility that cities which have been hurt by a declining manufacturing sector can foster renewed job growth and development that is sustainable into the future. Further research reveals that greening the economy is, if done correctly, a cost-effective mechanism that can allow large and mid-size Canadian cities the opportunity to mitigate climate change and positively impact non-climate change policy areas as well (Kousky and Schneider 2003; Thompson and Joseph 2011; Miller 2012). Placing a municipal lens on the global issue of climate change affords cities the opportunity to learn to develop creative and innovative policy solutions that reap both the environmental and economic benefits of green policies. The City of Toronto's 'Better Buildings Partnership', for example, allows the city to improve energy efficiency while stimulating job growth through public-private partnerships ('Building Better Partnership' 2013; City of Toronto 2007). In addition, striving to become the greenest city in the world, the City of Vancouver is working to create thousands of new jobs through the construction of green buildings, energy efficient technologies and sustainable public transit planning (Wyatt 2010). However, to reap the full co-benefits of a green economy necessitates that the will require that the traditional 'jobs vs. the environment' narrative is effectively challenged (Forstater 2006: 58). It is not until citizens and governments fully understand the social and economic benefits of green economic policies that such a narrative will be conceptualized as a 'jobs *and* the environment' mentality (Forstater 2006: 61).

Next Steps

Green economic development is an unfolding dialogue that needs to progress. While the evidence clearly indicates that cities are a suitable location for the development and implementation of climate change mitigation strategies, it is critical to recognize that there are barriers to local action. Acknowledging that there are barriers to local action is essential for learning from the past and moving forward. Understanding best practices and unsuccessful attempts will allow cities to make more effective and efficient decisions regarding the development and implementation of green policies. While there are tremendous benefits to greening the economy at the municipal level, barriers to local action, which will be addressed below, can hamper the success of strategies aiming to mitigate climate change and strengthen economic greening.

Cities interested in mitigating climate change and fostering other green initiatives are often faced with financial obstacles, incomplete information, lack of authority, insufficient capacity challenges, and limited human resources (Robinson and Gore 2005: 104-108; Schreurs 2008: 352-354; Courchene 2007). Categorizing cities as 'action' and 'non-action' municipalities, Robinson and Gore found that budget restrictions were a barrier to action on climate change proposals for 47% of 'action municipalities' (2005: 111-115). The economic crisis of 2008 and subsequent recession and austerity agenda have placed additional financial restraints on local government budgets. With a growing uncertainty regarding the role that local governments can play in mitigating climate

change and promoting green growth, cities often find themselves at a standstill, unable to act due to capacity and information barriers (Robinson and Gore 2005: 111-115; Schreurs 2008: 352-354). As previously noted, climate change and climate change mitigation are often thought of as national and international scale policy problems. Such traditional and hierarchical understandings of climate change mitigation can impede local action (Bai 2007; Gore 2010). Without enhanced cross-collaboration amongst all orders of government and sectors, climate change mitigation will continue to be seen as nothing more than a global issue to be addressed only by higher levels of government (Bulkeley 2011).

Although many cities strive to take on a larger and more significant role in relation to climate change, there are a number of barriers that continue to inhibit climate change initiatives at the local level (Kousky and Schneider 2003: 362-367). For instance, the levers municipalities have available to influence climate change mitigation policies can increase the costs absorbed by local governments if efficiencies are not maximized. Also, if efficiencies are not maximized, hidden costs, including maintenance and operation expenses, may negate the economic benefits of green policies (Kousky and Schneider 2003; Corfee-Morlot, et al. 2009). Moreover, Kousky and Schneider note that principle-agent problems can raise obstacles to local climate change initiatives. Principle-agent problems arise when the level of government making the investment decision is not the level of government footing the bill, a barrier that can lead to disjointed policy development and program implementation (Kousky and Schneider 2003: 362-367). However, a review of the literature reveals that there is limited discussion within the research regarding how local governments can overcome barriers that inhibit them from addressing climate change.

In addition, while civic participation has the power to support the sustainability of green economic development opportunities at the local level, it also has the power to impede progress through the erection of multiple barriers. Portney argues that the ‘three deadly sins’ – tragedy of the commons, NIMBYism and an expanding ecological footprint - can also lie at the heart of un-sustainability (2005: 585-586). Bulkeley notes that a lack of ‘theoretical enthusiasm’ can inhibit green economic policies from gaining support from the citizenry (2000: 292). Therefore, resistance from the citizenry can inhibit the affectivity of climate change initiatives and the overall sustainability of green policies.

The literature reveals that while there is an abundance of evidence indicating the numerous benefits to sustainable green economic development and climate change initiatives, limited discussion is provided as to why a larger number of cities and local governments have not pursued such policies and programs. Given that local governments often face revenue and financial obstacles related to the development and implementation of policies and programs, it is evident that economically sustainable environmental policies at the local state level will require coordination with the private and non-profit sectors. Best practices related to coordination amongst the sectors will allow local governments to ensure their policies and programs are efficient, effective and undertaken in the interest of the entire community.

While scholars often discuss various frameworks for local government action on climate change, the reality is that such frameworks are often not supported by legislation. Municipalities in Canada have no formal constitutional status; they are creatures of the province legally speaking. Thus, local governments must work under the authority of a higher level of government on a number of key policy issues. With no national framework supporting the role of cities in greening the economy, the ability for long-term, systemic change is inhibited. While cities may face less ‘ideological gridlock,’ they often do not have the social, economic and political resources to deliver large-scale and long-term green economic policies without collaboration with other levels of government, the private sector and/or the non-profit sector (Thompson and Joseph 2011). Cities in many other provinces and countries have access to a greater portion of a nation’s financial resources. In Canada, however, local governments face severe financial constraints (Courchene 2007). Some scholars suggest that cities can utilize policy tools, such as user fees and property tax reform, to mitigate climate change and strengthen the local economy, but cities often have limited authority to implement revenue-raising mechanisms and face great public resistance towards increased taxes and other municipal charges and fees (Courchene 2007; Thompson and Joseph 2011; Toly 2008).

“The time has now come for greater partnership between municipalities and the federal government – and for the federal government to put in place the policy framework that will multiply the benefits of municipal action and position Canada for the future” (Thompson and Joseph 2011: 2)

Overall, the literature reveals that greater research and analysis is required on the role that cities have in planning, developing and implementing green economic development policies. In moving forward cities need to play a lead role in greening the economy. An enhanced understanding of best practices, local policy tools and strategies for overcoming local barriers, as well as an activated and empowered civil society, including trade unions, at the local level is required to push forward the green cities agenda.

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