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Cities as Catalysts for Climate Action: The Rise of Cities as Catalysts for Effective Climate Action in a Post-Westphalian Landscape

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Abstract

Globalization is a dynamic, transboundary force challenging the Westphalian model of state-dominated geopolitics that has dominated world affairs for nearly 400 years. Equally problematic to state-centric international relations is global climate change, an environmental calamity that is increasingly being recognized as a threat to state security, yet cannot be solved by traditional diplomatic or military means. Consequently, an array of sub-national actors are becoming more influential in all areas of global governance, including the management of the planet's ecological commons. This paper explores how cities are following the trajectory of this trend to establish themselves as world leaders in formulating climate change agendas. Inconsistent efforts to draft effective climate strategies at the state and international levels are contributing to this power shift, along with the ability of metro-regions to establish global networks dedicated to sound emissions reduction and climate planning strategies. Analysis further shows that urban areas are important loci of economic production and commodities output, as well as key entry points for domestic and international trade, the combination of which suggests metro-regions have the necessary capital and political wherewithal to serve as initiators of green diplomacy. Discussion follows concerning the specific intra-state and transnational efforts cities are taking to become catalysts for international climate action, as well as what unique challenges they face.

Introduction

From the columned amphitheaters of ancient Greece to the storied halls of the United States Congress, political discourse has shaped our collective destinies for millennia. Traditionally, this discourse has been born out of competing paradigms attempting to define how things are, how things should be, and how things can be changed to satisfy an ever shifting array of human needs and desires. The cessation of wars has been the result of this process, as have some of history's greatest civil rights movements. And while territorial conflicts and social equity matters remain important aims for all governing bodies, political actors have increasingly been challenged to integrate the needs of the built environment into the biophysical realm, as demonstrated by ongoing debates concerning how greenhouse gas (GHG) emissions should be regulated. The dominance of GHGs in current political arenas is related, of course, to their contribution to climate change, a severe environmental crisis that if left unabated has the potential of making "the twenty-first century . . . the age of global catastrophe" (Matthew, 2010, p. 342).

At first glance, it would seem a multi-national approach toward curtailing GHGs would be an appropriate and sensible strategy, especially since the atmosphere is a ubiquitous resource shared by all peoples. Such an approach fits neatly into the Westphalian model of state-dominated governance that has held sway for nearly four centuries (Segbers, 2011). Despite these considerations, it is actually cities that are quickly becoming the most important players in global environmental governance. Their ascendancy into this role is somewhat paradoxical given they have traditionally been embedded within the larger body politic of their parent nation, a configuration that would seem to reinforce the idea that international governance is the exclusive domain of the state. However, extensive networks of cities active in formulating climate change agendas are challenging states for primacy in green international relations. To understand how this shift in influence has taken shape, this paper will create a historical backdrop illustrative of how globalization and environmental threats are creating the political spaces necessary for cities to become world leaders in negotiating climate planning. An examination will follow as to why cities are the most likely sub-national actors to fulfill this role, along with a review of the specific steps they are taking as catalysts for international climate action in a global commons no longer dominated by the state.

Westphalian Geopolitics, Globalization, and Environmental Crises

International relations have long been dictated by a state-centric form of geopolitics known as the Westphalian System. This system is predicated on the idea that each nation-state is a sovereign territory equal in legal stature as its neighbors, and free to govern its domestic structures independent of outside intervention (Falk, 2002). Historically, this political construct is acknowledged as having its origins in the 1648 Peace of Westphalia, a series of treaties born out of the ashes of Europe's Thirty Years' War (Ruggie, 1993). As a consequence of these proceedings, European dignitaries came to recognize a more clearly legitimized notion of sovereignty where the state supplanted previous medieval organizational forms as having the greatest authority within its territorial boundaries. Initially, this sovereignty-based, state-centric approach to governance was viewed as a necessary step if Europe was to eschew decades of war in favor of a more balanced network of power (Croxton, 1999). Johan Adler Salvius, a Swedish baron present during the 1648 treaties, cogently described the idea of European power symmetry by noting "The first rule of politics is that the security of all depends

on the equilibrium of the individuals. When one begins to become powerful . . . the others place themselves, through unions or alliances, into the opposite balance in order to maintain the equipoise" (qtd. in Croxton, 1999, p. 590). Westphalian ideas of sovereignty became further entrenched by the 1713 Treaty of Utrecht which saw its participants crystallize statist theory through their acknowledgment that "a defense of [power] equilibrium should be the core concern of all" (Ruggie, 1993).

Ultimately, Westphalian geopolitics evolved beyond the European milieu to shape global relations everywhere, principally as a consequence of Imperial conquest and colonization, but also as a necessary repercussive of post-World War I and II statesmen who viewed the Westphalian model as being the geopolitical archetype most suitable for keeping world relations intact (Falk, 2002). Accordingly, Westphalian sovereignty is often viewed as the progenitor of modern political realism where state capacity and survival are seen as priorities for world leaders who must seek to enhance their own national interests while keeping the aggressive tendencies of other self-interested states at bay through alliances and the development of potent economic and military factors (Ruggie, 1993.). While it is debatable whether or not Westphalian thinking has lessened or worsened the world's reoccurring spates of political turbulence, it is generally agreed that statism is and has been the dominant means by which the international community maps its diplomatic orientation. Yet despite its significance in shaping world affairs, there is a growing sense the Westphalian model is being reconfigured by two of the 21st century's most transformative agents: globalization and environmental crisis.

As a complex, worldwide process for economic integration and societal interchange, globalization has enabled the fluid translocation of people, finance, ideologies, and commodities. Appadurai (2008) believes this worldwide ebb and flow of diverse forces is a consequence of transportation and communication-based technologies that have allowed human interests to transcend physical and national boundaries alike. Consider that with the collapse of the Soviet Union the world is now completely encircled by a capitalist system "tooled by new information and communication technologies that are at the roots of new productivity sources, of new organizational forms, and of the formation of a global economy" (Castells, 1999, p. 2). Ohmae (2008) adds technological change is a dynamic force undermining the authority of states in what is increasingly becoming a cross-border civilization, one where far-reaching market actors will re-shape the world into a collection of economic zones untethered to nationalist designs. Segbers (2011) argues that at the very least globalization has created a new stratification of governance where global institutions, states, and sub-national players are now intertwined amongst one another in a new politics of scale which is as complex vertically as it is horizontally.

The rapid pace by which these economic, social, and geopolitical changes are occurring has created a melting-pot scenario for nation-states where their markets, finances, and cultural norms are becoming bit pieces in a newly emerging political economy that does not recognize long held ideas of state sovereignty. As a result, globalization is eroding the Westphalian model's long-lived, atomistic makeup of the world, replacing it with a mosaic of state and non-state actors who are finding an increasing number of footholds in an ever shifting geopolitical landscape (Dierwechter, 2013). Lemos and Agrawal (2006) argue globalization has completely re-organized the nation-state as a governing apparatus, creating a rescaled political space that transfers power upward to supranational agencies such as the United Nations even as it diffuses power downward to regional and local players. And while it is unlikely globalization will completely erase state borders

anytime soon, it is clear a post-Westphalian schema is emerging where traditional players such as nation-states are no longer the sole arbiters of governance and policy-making, even as today's relentless diaspora of people, money, goods, and ideas is opening new political spaces for non-state actors such as cities.

Unlike globalization, environmental threats have taken longer to alter the landscape of international relations despite the fact they have plagued human societies for most of recorded history. Diamond (2005) asserts a failure to adequately address deforestation and soil erosion led to the collapse of the ancient Maya. Similar issues haunted the Anasazi of southwest North America who completely razed the region's hardwood groves, mismanaged an over-extended irrigation system, and, as a consequence, were forced to abandon lands they had occupied for nearly five hundred years (Ibid.). On the surface it would seem as if these types of large-scale environmental calamities would decrease over time as advancements in scientific theory and technology have combined to provide a breathtaking array of knowledge and tools. However, this does not seem to be the case given environmental crises now stalk unabated across all seven continents. From undrinkable water to roiling clouds of noxious fumes, modern communities appear every bit as inept at managing their natural environs as their ill-fated ancestors. Dierwechter (2013) reports that until the end of the 19th century, past and modern societies shared another commonality: these issues were never a matter of transnational interest. This would change with industrialization, however, as factory caused effluence and air pollution began modifying the planet's waters and atmosphere at unprecedented rates. Soon, one person's toxic waste became everyone's as streams, oceans, and winds circulated pollution around the globe on an epic scale. States were quickly placed in the uncomfortable position of not only having to be accountable for their own industrial habits, but to also watchdog those of their neighbors.

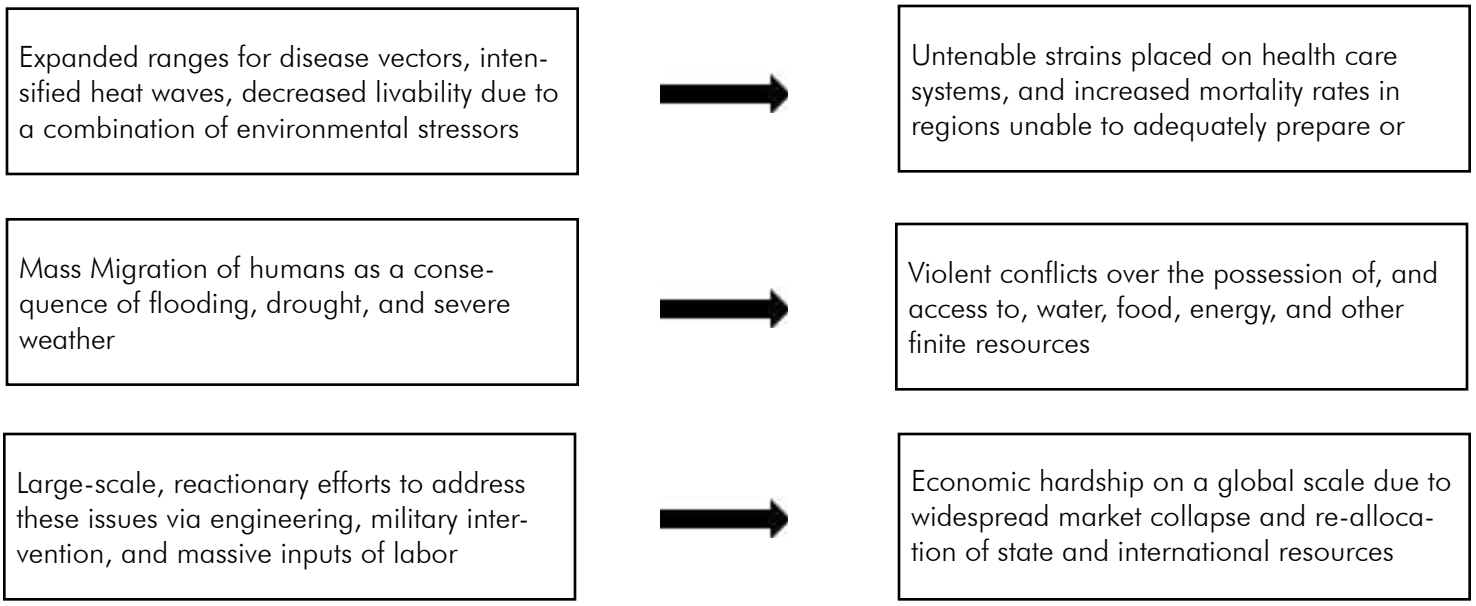
The ability of pollution to seep across geographic boundaries has led to a broad shift from the international community's usual preoccupation with state-to-state aggression; instead, territorially fixed governments must now contend with non-traditional security threats rooted in environmental crisis (Mathews, 1997). Episodes like Chernobyl and the 2011 Fukushima nuclear reactor breach have certainly cemented this reality for territorially fixed states who find themselves caught in the path of radiation contaminated air and water. Karkkainen (2004) likens such transboundary calamities as harbingers of a post-Westphalian system of international governance, clarifying that "Although states remain . . . important actors in the global arena and within their own territorial jurisdictions, sovereign states themselves have come to recognize that some environmental problems lie beyond the limits of ordinary state competence, too complex to be resolved through straightforward exercises of state sovereignty" (p. 74). Nowhere is this potential for geopolitical re-orientation more evident than in the penultimate environmental crisis of our time: global climate change.

Global Climate Change, Urban Realities, and the International Response

With its capacity to transform entire biomes, raise oceans above existing seaboards, and intensify inclement weather patterns worldwide, global climate change has been acknowledged by the international scientific community as the most pressing concern human societies face today (IPCC, 2013). When considering global climate change's impacts on natural systems, it is prudent to remember humankind's fate is directly tethered

to ecological outcomes. Recognition of this has forced political leaders to come to grips with the fact that climate change is every bit a danger to human infrastructures and well-being as it is to ecosystems. Matthew (2010) uses a potent cause-effect linkage to summarize these threats (see Figure 1):

[Figure 1]



All told these scenarios pose innumerable risks that might further destabilize areas already under duress from weak economies, political unrest, military strife, and poorly managed infrastructures (Ibid.). These realities are salient, for they remind us the Westphalian system of state sovereignty was created to safeguard against state-to-state aggression, and offers no benefit to nations facing a shapeless, amorphous threat of complex etiology such as global climate change.

Evaluation models for how climate change might affect human societies have traditionally been focused on nation-states, with a sizable number of these being directed toward agricultural and ecosystem impacts (Rosenzweig, 2010). This trend has changed in recent years, however, as scientists, politicians, and planners are now viewing the effects of climate change through an increasingly urban lens, a reprioritization that is unsurprising given nearly half of the world's population currently lives in cities with this amount expected to reach 80% by 2050 (Toly, 2011). From a planning and mitigation standpoint, this shift in human distribution cannot be understated, for it speaks to a newly emerging global cartography that places cities at the foreground of environmental issues. Accordingly, a multi-disciplined methodology has taken root where social, health, and biophysical scientists are working collaboratively to study the impacts climate change will have on the urban environment. This holistic approach toward assessing potential risks captures the interdependent nature of human health, ecosystems, and socioeconomic vitality, and reflects a new urgency in determining how cities are likely to fare in the wake of global climate change. It also reflects the broader contours by which climate change is now being evaluated, namely in research and scholarship that is increasingly becoming weighted toward urban considerations (Rosenzweig, 2010).

A review of empirical evidence affirms that urban populations will bear the brunt of climate change impacts in the coming years (Corfee-Morlot et al., 2009). Perhaps the most widely discussed example involves the risks presented by rising sea levels which threaten densely settled lowlands and estuarine watersheds both of which are susceptible to severe flooding (IPCC, 2013). McGranahan et al. (2007) report inhabitants of low elevation coastal zones will be particularly affected by climate change given nearly two-thirds of all cities with greater than five million residents occupy such areas. This translates into approximately 10% of the world's population living in harm's way of intractable flooding, putting them at risk for settlement displacement, economic decline, and high mortality rates. Perhaps equally alarming are the health implications of poor ambient air quality, as revealed in a study conducted by Bell et al. (2007). Various emissions projections related to climate change suggest urban populations will be particularly hard hit due to increases in tropospheric ozone levels during summer months, the net affect being a rise in associated adverse health conditions such as asthma, compromised lung function, and increased death rates among infants and the elderly. In addition, temperature projections for 2050 show a strong likelihood of extended periods of warmth such that mortality rates in U.S. metropolitan regions will see a 70% increase in heat stroke and heat exhaustion related deaths (Kalkstein & Greene, 2007). These studies speak to the urban realities of climate change, and underscore the consequences of the latter will be concentrated disproportionately among metropolitan regions and the people living there.

In recognizing the myriad threats posed by climate change, many political discussions at the national and sub-national level have arisen to define what the most effective strategies are for reducing GHG emissions. While currently prevalent across all strata of academic and political life, these talks were initially conducted by state dignitaries operating at global forums, since it was assumed that climate change was a large scale problem necessitating collaborative, international action. In fact, over the past thirty years numerous multi-national forums have been held to address climate change, including such signature events as the 1979 World Climate Conference, the 1988 Toronto Conference, and the 1995 United Nations Climate Change Conference (Gupta, 2010). Additionally, many other globally-tiered scientific and political gatherings similar to the 1987 Brundtland Commission have embedded climate change within the context of broader sustainability goals (World, 1987). While these meetings are emblematic of today's post-WWII internationalism where multiple states often work together on complex, trans-boundary issues, they were unprecedented for their time in that they reflected the emergence of the global climate onto the world political stage (Dierwechter, 2013).

Initially, multi-national efforts to curtail GHG emissions seemed quite promising. For example, Gupta (2010) reports the 1979 World Climate Conference led to a number of critically important research programs, including the Intergovernmental Panel for Climate Change which serves as a clearinghouse to review, decipher and disseminate "the most recent scientific, technical, and socio-economic information produced worldwide relevant to the understanding of climate change" (IPCC, 2013). Another fruitful multi-state effort concerning the atmosphere was the 1987 Montreal Protocol which successfully finalized an international treaty to protect the ozone layer from harmful chlorofluorocarbons (Clapp & Dauvergne, 2011). All told, these events heralded a new age of political governance where the mettle of states to resolve complex, trans-boundary environmental problems is being continuously tested. They also signaled an acknowledgement that humankind's relationship with the atmosphere is irrevocably changing, namely in that the latter is now a newly defined political space whose chemical make-up is as dependent on

anthropogenic processes as it is biophysical ones. Indeed, since 1979 the atmosphere has become more than a thin veil of life-supporting gases – it has become the premiere political space for multiple actors trying to articulate an appropriate framework of action for one of the planet's worst environmental problems.

While the 1987 Montreal Protocol stands as a model for multi-state environmental governance, international attempts to address climate change have been mostly mired in ineffectiveness since the WCC first met to discuss the issue in 1979. The reasons for this are varied, yet certain trends stand out as being especially problematic. First, many of the early GHG targets set by international accords were non-binding and often worded ambiguously. Second, the financial assistance promised to the global South to provide technological and developmental upgrades necessary for limiting emissions was frequently abandoned due to the economic shortfallings of the donors. Third, the economic collapse of middle-tiered nations such as Russia in 1997 meant that concurrent drops in GHG emissions by these countries demotivated them from being participants. Lastly, many periphery nations have been reluctant to embrace climate treaties for fear these agreements can be used to restrict their development (Gupta, 2010). Perhaps the worst stumbling block arose from the United States' refusal to become a signatory of the 1997 Kyoto Protocol. Born out of President George Bush's reluctance to push for a modification in American lifestyles, and matched by an equally bullish resistance from the industrial sector, the United States passed the Byrd-Hagel Resolution in 1997 which prohibited the U. S. from accepting ". . . any future binding quantitative [emissions] targets until and unless key developing countries also participated meaningfully . . ." (Ibid., p. 643). Consequently, past and present efforts made by international accords to address climate change have been uneven at best.

Cities as Catalysts for Climate Action

With state-led international efforts unable to curtail GHG emissions in a substantive, uniform fashion, and globalization challenging the Westphalian state-centric geopolitical system, the terrains of global governance and green diplomacy have changed dramatically over a handful of decades. This has allowed multiple non-state and sub-national actors to occupy the new political spaces that are emerging relative to climate action. Certainly this is nothing new given coalitions of non-governmental organizations (NGOs) dedicated to environmental issues have been active and increasing in influence since climate change first gained international attention during the latter part of the 20th century (Bouteligier, 2011). In the United States alone, sub-national actors have become increasingly relevant as exemplified by a 2007 coalition of American states that sued the Bush administration for its inability to appropriately regulate GHG emissions under the Clean Air Act (Selin & Van Dever, 2010). The most active sub-national forces for climate management and planning, however, appear to be cities given more and more urban areas are "reworking traditional hierarchal models of global climate governance by creating their own climate change programs" (Rice, 2013, p. 1). The development of this trend is reflexively linked to a complex web of environmental problems such as climate change that Toly (2011) claims are increasingly becoming "conditioned by the idiosyncrasies of the production, distribution, and consumption of wealth in cities. This relationship occasions the urbanization of global environmental governance" (p. 142). Toly's assessment undergirds the idea cities are no longer constrained to local environmental considerations, but are instead altering the types and complexities of envi-

ronmental issues faced by communities worldwide.

There are unique factors that make cities more effective than state and international coalitions when it comes to global environmental governance. To begin, ecological crises are usually dynamic and reflect complex relationships that exist between the built and natural environment. Karkkainen (2004) argues that for this reason state and international entities are ill-equipped to provide solutions, since they tend toward formulating rigid, highly prescriptive rules rather than flexible strategies capable of mitigating fluid environmental problems. Further, international pacts to reduce GHG emissions do not account for the realities of multiple causation and location specific tendencies, nor do they allow for flexible policymaking that can be easily adjusted outside of the international arena; rather, they rely on "one size fits all" emissions standards that attempt to shoebox climate action into a singular agreement (Gupta, 2010). On one hand, this sort of limited, command-style approach to problem solving is reflective of the Westphalian geopolitical model in that it assumes risk control on a transnational scale is best mediated by state players. On the other hand, it accentuates the need for a post-Westphalian style of governance that recognizes effective climate action will not be solved by statist policies alone, but will instead be resolved as a consequence of state and local actors working in concert.

Cities, in contrast to the international community they are a part of, are more proximal to the contributors and causal agents of global climate change, and are better suited to succeed where state coalitions have failed. As noted by Betsill and Bulkeley (2006), the issue of climate change is best handled by municipal leaders that can attune policy and mitigation efforts to the unique site-specific factors responsible for climate change:

> *GHG emissions originate from processes that are embedded in specific places, and it is often argued that the local is the most appropriate political jurisdiction for bringing about any necessary reductions in these emissions. Many [municipal] governments have considerable authority over land use planning and waste management and can play an important role in dealing with transportation issues and energy consumption (p. 141).*

Karkkainen (2004) adds environmental problems require local, adaptive management strategies which use place-based approaches built on "principles of continuous experimentation and dynamic adjustment in response to . . . new information, changing conditions, and the observed effects of past management efforts" (p. 79). This governance structure aligns well with urban leaders who can quickly and effectively tailor their climate agendas to local particularities, a policymaking formula absent from state and internationally directed plans. Finally, global treaties like the Kyoto Protocol are not legally binding agreements, thus they are incapable of exerting tangible influence on urban and market stakeholders capable of making or breaking climate change agendas. In contrast, cities and municipal leaders can "facilitate direct action in response to climate change by fostering partnerships with relevant stakeholders, encouraging public participation, and lobbying national governments" (Betsill & Bulkeley, 2006, p. 143).

Another reason why cities are ascending the ranks of global environmental governance is they are practically unmatched as engines of economic production, and can generate the capital necessary to influence both national and transnational polities. Their ability to create wealth is largely because they serve as hubs for industrial output and commodities exchange, and contribute heavily to international trade streams. It is also due to deep connections cities have to their surrounding geographies which

provide labor pools and sources of material inputs for the creation of goods (Corfee-Morlot et al., 2009). Accordingly, Dierwechter (2013) argues it is more accurate to describe cities and their neighboring territories as 'city-regions' defined by a complex array of interlacing economic, transportation, industrial, cultural, and sociopolitical systems. The end result of this configuration is city-regions represent agglomerate economies that not only comprise the bulk of their respective nation's output and labor development, but are also key regimes in the global economy. This is evidenced by the fact that in many Organization for Economic Cooperation and Development (OECD) countries – Norway, Japan, and France as examples – a single metro-region is responsible for producing one-third to one-half of its nation's GDP (Corfee-Morlot et al., 2009). This robust contribution to state and global economies, along with an expansive, uneven geography, rejects traditional assessments that cities are locally fixed, neatly demarcated zones, and presents them instead as large, densely populated areas affected by and affecting a larger tier of national and international processes. As such, cities have the economic, social, and political wherewithal necessary to influence climate action on a global scale.

With the economic and political influence necessary to become crucial players in emissions governance, cities have wasted no time in asserting themselves. This is best demonstrated in the United States where dissatisfaction with a tepid federal response to GHG mitigation has spurred city leaders to take action. The methodologies urban spaces are utilizing to influence climate action are quite varied, yet Segbers (2011) identifies networks of municipalities as the main channel by which the urbansphere is engaging in global climate governance. According to Dierwechter (2010), a prime example is the U.S. Mayors Climate Protection Agreement (MCPA) which was drafted in 2005 by then Seattle mayor Greg Nickels. This plan calls upon mayors from all fifty states to reduce GHGs to 7% below 1990 levels as originally targeted by the Kyoto Protocol. Elements of this plan include broad-based directives to reform urban land-use, transit, energy, housing, and waste systems. There is also a call for municipalities to actively lobby state and federal governments to adopt legislation supportive of and complementary to local climate action. Approximately 1,000 cities are currently participating in the MCPA, making it the signature sub-national climate action movement in the United States (Ibid.).

Along with domestic measures taken by U.S. urban leaders, international networks of cities are also making significant contributions. The C40 Cities Climate Leadership Group is one such assemblage, and is comprised of 58 major metropolitan regions that combined account for 18% of the world's gross domestic product. This powerful coalition has adopted a collaborative approach to addressing climate change as shown by its involvement in 4,734 collective actions aimed at developing state-of-the-art technologies and urban planning projects that can be utilized worldwide including:

- Low-carbon building designs reliant on renewable energy sources rather than fossil fuels
- Enhanced public health infrastructures capable of serving vulnerable communities affected by climate change
- Zero waste strategies centered around recycling, composting, and the use of waste by-products as inputs for industrial processes
- Education and outreach programs counseling individuals and firms on what specific steps they can take to lessen their emissions footprint

Equally impressive to these activities is the C40 members' commitment to sharing knowledge, assets, and technical expertise to non-member cities and national governments (C40, 2013). Much like the United States' MCPA participants, the C40 group is emblematic of the new leadership roles city-regions are taking relative to implementing ag-

gressive climate planning. Moreover, the C40's emphasis on knowledge diffusion across state boundaries highlights the ability of cities to influence international regimes. These supra-national networks are not only indicative of how emissions control measures and climate change initiatives are proliferating at the municipal level, they also suggest the atmosphere is becoming deeply embedded in all aspects of urban politics and planning.

Rice (2011) contends that if cities are to continue making significant inroads in the realm of environmental governance, they must align public sector strategies to the interests of private firms and individuals. This means municipalities must actively target businesses and citizens with education based, market driven solutions. Allman et al. (2004) report this has proven true in the United Kingdom where local authorities having the most success in addressing climate change are those who effectively increase public awareness of the secondary benefits of reducing GHG emissions, including green employment opportunities, improved livability, and independence from fossil fuels. In the Unites States, Seattle has rolled out several marketing campaigns to inform its citizens as to the health, economic, and environmental benefits of energy-efficiency measures and alternative transportation (Rice, 2011). In essence, cities are creatively finding ways to initiate smart climate planning by using economic motivators backed by scientific reasons. Politically these mechanisms have a number of benefits for local authorities: first, they engage citizens and private enterprises in a non-compulsory fashion that lowers resistance to climate initiatives; second, they expand knowledge across all fronts relative to threats posed by atmospheric warming; finally, they incentivize businesses to become willing participants by expounding the financial gains of greener communities. Ultimately, the sum effect is municipalities are able to move forward with new and novel forms of climate management.

Despite the growing role cities are playing in global climate governance, they are still vulnerable to the same political strife and generalized apathy that has often precluded states from making meaningful progress toward reducing GHG emissions. This should come as no surprise since the atmosphere as a political space is not immune to politicized science, or competing market interests that resist constraints to economic and industrialized development. In terms of the former, a skeptical public has often emerged who is unwilling to support environmentally driven initiatives viewed as too costly (Selin & Van Dever, 2010). In the case of the latter, a hostile business regime develops that attempts to subvert government controls by lobbying against climate-based projects. Other stumbling blocks faced by cities involve constraints imposed by fiscal stress (Rice, 2011). This has become increasingly problematic over the past decade as multiple financial crises have cast ripples of unemployment and market collapse across the entire global community. Cash strapped cities struggling to keep afloat are often unable to participate in meaningful climate planning (Allman et al., 2004), a reality difficult to escape given the monumental costs involved in reconfiguring petroleum-based transportation and industrial infrastructures into carbon-friendly ones. Consequently, fiscally delimited metro-regions must wait on the sidelines until a positive swing in the economy boosts their capital resources.

Dierwechter and Wessells (2013) posit another hurdle faced by cities is the conflicting attitudes lurking between urban cores and their suburban neighbors. In this case, disparate environmental priorities between the two often create an asymmetrical political framework where suburban apathy undermines the climate agendas of metropolitan leaders. This is due largely to suburbia's continued indulgence in post-Fordist development strategies that emphasize outward expansion, strip zoning, and automobile-driven transportation schemes. It is also due to disconcerting fiscal inequities embedded within metropolitan regions where "wealthy communities pick and choose the climate initiatives that

best suit their economic purposes, and less wealthy [ones] struggle to articulate and implement . . . 'green' rationales for new forms of growth and municipal function" (Ibid., p. 1382). These discontinuities in prioritization and political will present novel obstacles for effective climate change management, and will require inter-municipal efforts capable of bridging the divide between forward thinking urban leaders and free-riding municipalities. Failure to do so means urban initiatives dedicated to climate planning and emissions management will be grossly handicapped by those communities unwilling to a) coordinate effective climate agendas with their neighbors, and/or b) curb their appetites for unfettered material consumption, expanded spatial growth, and automobile-intensive transportation networks.

Inter-municipal political differences aside, there is also the question of whether all metro-regions are equally competent in effectively managing climate initiatives. This is currently an unresolved question due to the relative newness of cities as leaders in formulating sound climate action, as well as the diversity of city types – fishing, agrarian, high-tech, etc. – posing different urban management challenges (Dierwechter, 2013). Also, while several city networks are committed to reducing GHG emissions, there is the reality that cities are unparalleled sinks for natural resources, parasitizing outlying regions both locally and abroad for the material goods needed for survival. In terms of the transportation sector alone, Toly (2011) points out:

> *Industrial and post-industrial urban metabolisms require significant amounts of energy delivered in the form of electricity . . . heat, and fuel for transportation. Sustaining contemporary urban agglomerations requires not only the depletion of non-renewable energy sources, but also the appropriation of such sources from distant and vulnerable landscapes and communities (p. 143).*

Another distinction of cities is they are responsible for generating most of the world's GHG emissions – a tendency that is likely going to intensify in the coming decades given the rising trends in urbanization and population concentration occurring worldwide (Corfee-Morlot et al., 2009). This suggests cities will need to better manage their own urban infrastructures if they are to jump scale and become world leaders dedicated to sustainability and sound ecological stewardship.

Conclusion

Globalization and climate change have brought with them winds of change that are threatening the grip of a centuries old, state-centric system of global governance. Should this trend continue, the world's community of nations may well be in a post-Westphalian transition where sub-national actors such as cities become dynamic forces that forever alter the landscape of global politics and power. Evidence of this is already abundant, considering city-regions are filling the leadership void formed by nations unwilling or unable to adopt innovative climate goals. Yet despite their promise to become frontrunners in conceptualizing and initiating effective environmental planning, cities will need to answer many questions related to their own political economies and systems management. Changes will certainly need to occur as it relates to their contribution to emissions pollution, as well as to the asymmetrical alignment of municipal priorities that preclude cities from drafting uniform climate goals. Perhaps most importantly, metro-regions will need to abate a troubling propensity for draining local and foreign regions of their natural resources, and embrace a more holistic urban metabolism that better manages material and energy flows.

On a macro scale, the global community will need to come to terms with the new roles cities are playing in

green international relations. It will also mean concretizing the capabilities and appropriate roles for cities vis-à-vis global environmental governance. For example, are cities located in diverse corners of the world capable of mediating and resolving planetary-scale ecological crises affecting all peoples? What should the relationship of city efforts be in respect to those at the state level, and what is the most effective politics of scale for addressing climate change? Finally, can cities and states co-exist and forge collaborative resolutions, or are their goals incompatible? These questions are indicative of the uncertain crossroads the international community stands upon as it tries to make sense of globalization's new world order. Yet one thing seems certain: we are witnessing the birth of a new type of green internationalism where cities as agents of environmental planning are becoming every bit as important as the nations they reside in.

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