Collaborative Strategies for Sustainable Cities

Baltimore, like many other cities around the globe, is redesigning local government policy and programs in order to become a more sustainable city. Sustainability, as a concept guiding public action, encourages city officials to integrate policy and programs addressing the economic, environmental, and social health of the community. City governments, including Baltimore, have adopted plans to integrate this new priority into local policy and program management. Reorienting city policy and programs to address an emergent concern like sustainability requires collaboration between city government and various actors and organizations in the community.

Collaborative Strategies for Sustainable Cities examines how cities define sustainability and form policy implementation networks to integrate sustainability into city programs. Using the city of Baltimore to describe and analyze the involvement of the participants in local sustainability efforts in rich detail, Eric S. Zeemering argues that when we think about the sustainable city, the city government is not the best unit of analysis for our investigations or policy planning. Instead, policy networks within cities carve out slices of a sustainability agenda, define sustainability in their own ways, and form implementation networks with city government officials, neighborhood and community organizations, funders, and state and federal agencies in order to achieve specific goals. When cities begin to integrate sustainability into policies and programs, surveying and understanding competing definitions of sustainability within the community may be central to their success.

The book's rich array of data, including qualitative data from elite interviews and public documents, Q-methodology and social network analysis will make for an engaging read to scholars of political science or public affairs as well as the interested citizen or policy advocate.

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Climate change, loss of habitat and bio-diversity, water security, and the effects of new technologies are placing pressure at all levels of government for effective policy responses. Old policy solutions and the administrative processes associated with them not only seem inadequate for managing environmental and energy sustainability issues, but even counterproductive. The challenge for societies worldwide often is how best to harness in the public interest the dynamism of markets, the passion and commitment of nonprofit and nongovernmental organizations, and the public interest oriented expertise of career civil servants at all levels of government. Routledge Studies on Public Administration and Environmental Sustainability focuses on core public administration questions as they relate to the topics of environmental, energy, and natural resources policies, and which together comprise the field of environmental sustainability.

Collaborative Strategies for Sustainable Cities

Economy, Environment and Community in Baltimore

Eric S. Zeemering

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This book is dedicated to Kesha Zeemering, who works to make our home and family more sustainable each day.

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Acronyms

ACF	Advocacy Coalition Framework
ARRA	American Recovery and Reinvestment Act of 2009
BCF	Baltimore Community Foundation
BCPS	Baltimore City Public Schools
BDC	Baltimore Development Corporation
BES	Baltimore Ecosystem Study
BGCA	Baltimore Green Currency Association
BJEN	Baltimore Jewish Environmental Network
BNIA	Baltimore Neighborhood Indicators Alliance
CCP	Cities for Climate Protection
CDC	Community Development Corporation
CoS	Commission on Sustainability
CSA	Community Supported Agriculture
CUERE	Center for Urban Environmental Research and Education
EPA	Environmental Protection Agency
GBC	Greater Baltimore Committee
GHG	Greenhouse Gas
GIS	Geographic Information Systems
HUD	United States Department of Housing and Urban Development
ICA	Institutional Collective Action
LEED	Leadership in Energy and Environmental Design
LTER	Long-Term Ecological Research
MTA	Maryland Transit Administration
PAC	Political Action Committee
PHCHA	Parks Heights Community Health Alliance
RHIC	Reservoir Hill Improvement Council
SNA	Social Network Analysis
STEW-MAP	Stewardship Mapping and Assessment Project
UMBC	University of Maryland Baltimore County
USDA	United States Department of Agriculture
USGBC	United States Green Building Council
VOC	Volatile Organic Compound

Preface

If this book yields new insights about how cities implement policies to be more sustainable, then credit should be given to the many government officials, community activists, and business leaders who spend time thinking about what sustainability means for their work. During my research for this book, I spoke with many people who are thinking about urban sustainability in Baltimore. I am encouraged by their dedication to Baltimore and their passion for making this city a better place to live. I extend my sincere thanks to each person who took time to talk with me about their work in Baltimore.

In advance, I want to thank the readers of this book who will think about sustainability in their own cities and communities and contribute to this important conversation about community growth, health, and prosperity. I believe this book will be useful to scholars and students who hope to better understand how urban sustainability is defined and implemented. I hope the book will spur new conversations about urban sustainability in Baltimore and in cities around the globe. The hard work of citizens groups, businesses, and public agencies in Baltimore described in this book shows us that benefits do come from working to make a community more sustainable, even if we do not agree on one crisp and unified definition of *sustainability*.

As I conducted the research for this book, I had the opportunity to share my ideas about urban sustainability with various audiences, and the resulting discussions shaped and improved this investigation. I thank Robert Huckfeldt at the University of California Sacramento Center, Claire Welty at UMBC's Center for Urban Environmental Research and Education, Roger Durham at Aquinas College, and Abby York at Arizona State University for providing these opportunities. My arguments have also been helped along by thoughtful feedback from colleagues and scholars including (alphabetically) Julia Azari, Jered Carr, Richard Feiock, Al Hyde, Scott Swearingen, and anonymous reviewers from Routledge. At Routledge, I thank Natalja Mortensen and Darcy Bullock for helping me commit to a book length project and seeing it through to success. My mother, Wilma Nelson, offered a careful proof reading of the manuscript.

My mother-in-law, Shelly Mason, helped with editing photographs. Matthew Kachura and Cheryl Knott at the Baltimore Neighborhood Indicators Alliance—Jacob France Institute provided and granted permission to use two of their excellent maps which enrich the book. At UMBC, my research assistant John Olszewski, Jr. helped me track down a variety of documents and sundry details. John Jeffries, former Dean of the College of Arts, Humanities, and Social Sciences, and Don Norris, Chair of the Department of Public Policy, provided support for the transcription of research interviews, critical help to move this book to completion.

Most importantly, my wife Kesha and son Mason provided the encouragement to keep writing. They deserve special recognition, a trip to the farmers market, and a day at the park with no time constraints related to a writing deadline.

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Eric S. Zeemering
Baltimore, Maryland
October 5, 2013

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Series Foreword: Collaborative Strategies for Sustainable Cities

Most environmental policy experts would agree that the concept of sustainability enjoys its most fruitful expressions in the United States at the local level, in the form of various smart growth and sustainable city initiatives. Most of the attention in this sustainable city movement has gone to cities like Portland (Oregon), Seattle, and San Francisco, and more recently to New York, Chicago, and Denver. Baltimore typically does not rank as high in glamour or reputation for social and political innovation as these cities. It is, like many other American cities, an old industrial and port city known for its distinctive neighborhoods, array of social problems, and economic challenges. It typically would not come to the top of the list of, as Kent Portney has put it, cities that "take sustainability seriously."[1] This is all the more reason to give Eric Zeemering's study of sustainability policies and initiatives in Charm City serious attention. That such cities as Baltimore (and Cleveland, Pittsburgh, and Philadelphia, among others) are incorporating aspects of the sustainability concept into their economic planning and social policies is a major and significant trend.

Eric Zeemering's *Collaborative Strategies for Sustainable Cities* makes several contributions to the literature on sustainability. A particular one is the attention he gives to how various leaders and organizations define the concept of sustainability. Never known for intellectual or definitional precision, the sustainability concept may be interpreted and applied in many ways. Zeemering's analysis explores these differences. In Baltimore, it is possible to identify three working definitions of the concept: environmental sustainability, urban rebuilding, and civic health and justice. The first emphasizes the need to protect, restore, and manage natural resources in a city; the second stresses business expansion and development; and the third focuses on social fairness and opportunity. Each definition draws support from within the community, but from different constituencies and interests. Integrating them into one overall set of sustainability strategies is a formidable but necessary task for city leaders. The study makes creative use of various research tools, among them

Q-methodology and network analysis, in exploring the efforts to link these definitions and connecting the groups that are promoting them.

This study also illuminates the many challenges in reorienting American cities to a vision of sustainability. In the global context, for example, slower population growth is one of the core tenets of a sustainability transition. And yet, if Baltimore intends to maintain its economic viability, which arguably makes environmental sustainability achievable, it needs to regain population. Globally, the tension between economic growth and ecological vitality is constantly debated, with a great deal of attention to the need for slower growth, at least in the developed countries. In cities like Baltimore, lack of responsible growth risks a downward spiral in which not only economic but environmental and social aspirations go unfilled. The consequences of economic contraction and thus social and ecological decline are abundantly clear in cities like Detroit.

This study of Baltimore offers insight into the role of community engagement and social capital—of people working together to develop and fulfill a vision that most of them can agree with—in promoting a transition toward environmental, economic, and social sustainability. It underscores the point made often in the sustainable cities literature: that sustainability is not just a matter of using technology or redesigning incentives and investments, but of people working together for their common good. Indeed, the main value of sustainability may be to provide a framework for engaging cities, communities, and neighborhoods in the pursuit of a shared vision.

Throughout this book, the crucial role of effective and enlightened governance is clear. Sustainability transitions, at any level of government, do not just happen. They require creative leadership, institutional adaptation, community participation, and policy innovation. How these governance capacities emerge and the barriers to realizing them are amply illustrated in the book.

The Routledge series on "Public Administration and Environmental Sustainability" aims to examine practical applications of the sustainability concept, highlight the role of governance, inform practitioners on the critical interdependence among varied policy goals, and provide students of public affairs and administration with the knowledge and skills needed for a new era of public administration. This new era is full of constraints, in that economic goals may no longer be pursued without careful regard for the effects of growth on the environment. But it also is full of opportunities: for energy efficiency, reduced pollution, greener buildings and urban designs, more engaged communities, a stronger sense of place and history, and a better quality of life. That cities like Baltimore recognize these constraints and have set out to pursue the opportunities is good news for advocates of managed development in a sustainability framework.

This book is timely and relevant. It improves our theoretical and practical understanding of sustainable cities, network governance, community participation, and urban politics. *Collaborative Strategies for Sustainable Cities* expands upon a rich and growing literature on how best to meet a central challenge of the 21st century. We are pleased to present it as one of the first contributions to our series on "Public Administration and Environmental Sustainability."

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Daniel J. Fiorino
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NOTE

1. Kent E. Portney, Taking Sustainable Cities Seriously: Economic Development, the Environment, and Quality of Life in American Cities, 2d ed. Cambridge, MA: MIT Press, 2013.

1 Being a Sustainable City

On Labor Day weekend in 2011, the first running of the Baltimore Grand Prix introduced IndyCar and American Le Mans Series racing to the streets of Baltimore. The public debate swirling around this event contained the often proffered view that economic growth in a city stands in conflict with local environmental quality. As described by proponents of the downtown auto race, the event was a success and its continuation fuels economic benefits for the city. The first Grand Prix of Baltimore attracted large numbers of spectators to the city's downtown on an otherwise slow summer weekend. The influx of people and dollars was expected to benefit local restaurants and other small businesses, though post-event media coverage and academic analysis called these claims into question (Coates and Friedman 2011). Media images of the race featured Baltimore's iconic Inner Harbor and gave the city a chance to present a positive image to a global audience of television viewers. The racing event was the latest manifestation of a development strategy that has driven public action in Baltimore for decades, channeling resources to the visitor and entertainment core of the city, bringing suburban residents and tourists to the city's heart for entertainment, spending, and consumption (Eisinger 2000; Friedman, Bustad, and Andrews 2012; Norris 2003). While the racing event symbolized another positive step in downtown prosperity to some, the event set off alarms for others.

For those concerned with local environmental quality, problems began before the race cars even arrived. Trees became a symbol of the environmental costs of hosting the racing event. A photographer for *The Baltimore Sun* took pictures of healthy trees being removed from streets along the raceway in early August, sparking a public outcry and online petition (Wheeler 2011a). Residents lost their attempt in court to obtain a restraining order to prevent the removal of additional trees, but drew publicity and expressed satisfaction about making the terms of the city's tree deal with racing organizers more transparent (Wheeler 2011b). A commitment to plant 198 trees was made by event organizer Baltimore Racing Development, but their financial plight and dissolution after the race left the pledge unfulfilled. In total, thirty-two trees were removed for

the race. The city fulfilled the original commitment for replacement and new tree planting at a cost of $41,500 in public funds (Wheeler 2012). Beyond the tree controversy, *The Baltimore Sun* reported race promoters took steps to make the event the "greenest Grand Prix ever," with bio-degradable concessions containers and the wide availability of recycling bins. Still, uncertainty existed about the air quality impacts of the race and accompanying event traffic, the scope of carbon dioxide emissions, and health complications for city residents with breathing problems (Wheeler and Cohn 2011). The public discussions about tree removal and air quality highlighted environmental costs of the racing event and the apparent trade-off policymakers and event promoters confront when pursuing new economic opportunities.

For cities striving to be vibrant places in which people want to live, work, and invest, debates that pit economic opportunity against the environment may seem inevitable; however, different discussions are possible. Cities are giving serious attention to *urban sustainability*. These cities seek to develop cities that are economically prosperous, boast robust environmental amenities and healthy ecosystems, and attend to social equity for all city residents. While environmental protection and economic growth may stand in tension, this need not be true (e.g., Daily and Ellison 2002; Feiock and Stream 2001; Hempel 2009; Portney 2013). Policymakers have opportunities to frame discussions about growth and development in more constructive ways (Hoffman and Ventresca 1999). The concept of *urban sustainability* offers a different way for policymakers and residents to discuss a city's future. By asserting value in balancing economic, environmental, and social goals for the long-term intergenerational health of a community, those advancing urban sustainability are asking challenging questions about how previously siloed urban policies can be integrated and reconciled. Some cities will use urban sustainability as a buzz word to trumpet scattered environmental initiatives, but cities truly working to be more sustainable will use the concept as a strategy to guide policymaking, growth, and community development.

What can Baltimore do in order to be a more sustainable city? The answers to this question hinge on the definition of *urban sustainability*. Cities around the globe are taking action to become more sustainable places, but surveying the range of local programs linked to the elusive concept may only lead to more questions about how sustainability can be defined for a city. Baltimore is not alone in confronting this complicated public policy puzzle, but the city provides a practical case in which government, businesses, community based organizations, and the public are contesting the concept with the hope of definitional clarity and policy progress. Urban sustainability may be hard to define, but definitional problems do not stop communities from taking pragmatic steps to improve their long-term economic, environmental, and social health.

This book uses Baltimore City as a case study in order to better understand the coordinated action that occurs between governmental and nongovernmental actors in order to advance sustainability goals within a community. Before any action is taken, participants in urban policy must come to some conclusions about what *urban sustainability* means and how the concept can be translated into policies for implementation. An inquiry into the meaning of urban sustainability in Baltimore can benefit urban policy well beyond the city's roughly 80 square miles and estimated 621,342 residents (U.S. Census Bureau 2013). As a case study, the book offers rich descriptive detail about programs and goals at the center of Baltimore's efforts to be more sustainable. However, readers who care about what cities are doing to be more sustainability should seek more than examples. With the surge of interest in urban sustainability has come a cascading list of professional reports, best practice advice, and case studies of what cities can do to pursue more sustainable development. News about innovative sustainability programs can spread quickly through online blogs and social media sites. To make new contributions to our understanding of sustainable cities, a case study of Baltimore must push us to think about how many separate definitions of sustainability link into a larger policy dialogue. Then, we must explore the relationship between the city's dialogue about sustainability and the implementation of programs to make the city more sustainable. In other words, our understanding of urban sustainability can be advanced by examining the connections linking the many initiatives and actors in the city seeking to improve urban conditions.

By learning more about urban sustainability in Baltimore, we can grapple with how local actors define and take action on this complicated concept. Studying Baltimore helps us confront two critical questions for cities that hope to make progress on urban sustainability. First, how is urban sustainability defined within a city? Policymakers and activists may reference definitions of sustainability that emerge from international policy dialogue about the environment and climate change or from the actions of other cities. Yet, urban sustainability takes on unique local meaning within individual cities. Research on urban sustainability must unearth the details about how sustainability has emerged as a priority for action within an individual city. The research reported in this book can help us understand how advocates of urban farming, tree planting, downtown housing, and large public entertainment events can all discuss connections between their work and the goal of a more sustainable future for Baltimore. Learning about Baltimore's work in urban sustainability should encourage scholars and policymakers to consider the intricate connections that exist between a city's unique context and the understanding of urban sustainability held by local actors.

To understand how sustainability is defined in Baltimore, in-depth interviews have been used to uncover a diverse range of perspectives on the concept from actors inside and outside of city government. This research advances our understanding of urban sustainability by investigating how the concept is defined at the ground-level by the actors who seek to translate the complicated policy goal of sustainability into action. This case study offers insight into the meaning and complexity of urban sustainability through the words of those grappling with the concept in Baltimore. The insights of eighty-five different individuals from government, nongovernmental organizations, and local businesses provide a greater breadth of commentary on the challenge of making a city sustainable than can be found in most other current works on the topic.

To provide systematic analysis of how local actors define urban sustainability in Baltimore, this research uses Q-methodology to measure actors' operational definitions of the concept. Research using Q-methodology asks respondents to systematically sort statements in order to explore their subjective understanding of a concept. In Baltimore, local actors working on sustainability were asked, "What are the most important things Baltimore can do in order to be a more sustainable city?" By sorting policy statements taken from the local political dialogue about urban sustainability, this research measures differences in how actors conceptualize and operationally define the concept. In Baltimore, this research identified three distinct operational definitions of urban sustainability—one focused on the environment, a second focused on urban rebuilding and economic development, and a third focused on civic health and justice. Each definition of urban sustainability is discussed in detail, with examples of urban sustainability initiatives underway in the city.

This approach to exploring the local definition of urban sustainability is important for two reasons. First, this inductive research approach takes the local political dialogue about urban sustainability as a starting point, rather than assessing the extent to which a city conforms to an externally derived definition of sustainability. A deep understanding of a city's political, ecological, and social conditions should inform policy discussions about urban sustainability. Yet, current trends in public policy may push cities to look elsewhere for insights about sustainability before they look inside their own jurisdictional borders. With the growing popularity of urban sustainability, city policymakers may find copying examples of successful policies and initiatives from other jurisdictions to be an easy way to begin work on sustainability. Pressure for government accountability also pushes public officials to measure indicators of progress on sustainability goals. Comparisons of urban sustainability performance across cities can push policymakers to focus on similar types of measurable activities. While some value exists in learning from other jurisdictions, cities can benefit from exploring the meaning of sustainability within their own communities. Reflection on how local actors in a city

are already taking action on urban sustainability can help a city government better integrate their sustainability strategy with the capacity for action that already exists within the community. Baltimore's experience with sustainability illustrates the value of understanding how local actors engage with the concept of urban sustainability and how they can aid city government with policy implementation.

Second, Q-methodology is presented as a social science research technique that policy analysts in other cities can use in order to better understand how urban sustainability is uniquely understood in the context of their own city. Policy analysts and city government officials responsible for urban sustainability should think about this book as a template for the development of a policy report that provides insight into what local actors in their own city think about urban sustainability. Surveying the local political dialogue about urban sustainability and asking local actors to prioritize the policies of greatest importance can help policymakers better understand the areas of agreement and disagreement that exist on the question of what a city should do in order to pursue sustainability. As described in the pages ahead, Q-methodology provides a useful tool for discerning multiple and distinct local definitions of urban sustainability. The method also provides a tool for policy analysts to identify areas in which broad coalitions might be built around the need for public action.

How a city defines urban sustainability is interesting, but most scholars and policymakers are also concerned with the steps that can be taken to implement sustainability policies. Therefore, this case study of Baltimore explores a second and related research question. Do definitions of urban sustainability help structure the policy networks that implement various aspects of a city's sustainability vision? Understanding how local actors in both government and civil society define urban sustainability provides a foundation for analyzing policy development and implementation. Within a city, actions to be more sustainable are both influenced by and implemented by a range of actors that includes, but is not limited to government. Nongovernmental organizations, ranging from formally organized non-profits to informal groups of activists in civil society play a role in making urban sustainability work. With declining public sector resources and a reconceptualization of the responsibilities of government, nongovernmental groups may take a leading role in implementing public policy (Peters and Pierre 1998; Rhodes 1997). Local businesses and the mass public may also be engaged in a city's efforts to become more sustainable. As actors in the community think about their own definitions of what must be done to make the city more sustainable, they enter into discussions with like-minded actors and form interlacing relationships and partnerships to work on programs to implement a shared vision of urban sustainability. This research explores the link between shared understandings of urban

sustainability and the working relationships that exist among actors working on sustainability in Baltimore.

The investigation into the working relationships that develop within Baltimore around the goals of urban sustainability will interest those concerned about urban policymaking, but the discussion will also benefit scholars thinking about policy implementation. The network, or the multi-organizational setting in which many public policies are debated and implemented, has become a critical unit of analysis in public administration research (O'Toole 1997). Increasingly, studies give attention to well-established and formalized public management networks in which actors coordinate action to implement public programs (e.g., Agranoff 2007). While formalized networks are important to understand, researchers must also give attention to informal policy networks which tie actors together in ad-hoc patterns of coordination. Indeed, when problem solving is pushed into the realm of networks, the role of government may be more complicated and difficult to understand (e.g., Koontz et al. 2004). This study of urban sustainability in Baltimore shows that formalized networks exist in fields of policy related to urban sustainability, but many urban sustainability initiatives bring together a diverse set of actors for work on occasional or ad-hoc initiatives. Understanding the scope and organization of informal policy networks has important implications for a city's work in urban sustainability. The mobilization of actors outside of government and the capacity of informal networks to take action may influence the ability of a city to achieve its wide-ranging sustainability goals.

The remainder of this chapter sets the stage for an in-depth study of urban sustainability in Baltimore, Maryland. Before discussing theoretical lenses that help us better understand the two research questions that animate this book, a review of what we already know about cities' efforts to be more sustainable places will help set the stage for our inquiry. The next section explores reasons why city governments are giving attention to urban sustainability. Then, the scope of activity that cities undertake in the interest of becoming more sustainable is discussed. The chapter also offers a summary of the research that describes which cities are most likely to adopt sustainability policies. Then, several different definitions of urban sustainability are reviewed in order to illustrate the lack of consensus surrounding the concept. Finally, a network theory of urban sustainability is presented as a guiding framework for this investigation of sustainability in Baltimore. The first chapter concludes with a few comments about how this research relates to other important questions in urban politics research and a preview of each chapter. Readers who are most interested in Baltimore's experience with sustainability and least interested in a review of research on sustainability and urban policy might want to skip ahead to chapter two, which explains how sustainability emerged on the city's political agenda.

LOCAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT

Sustainable development has become a topic *du jour* among city officials and in urban policy circles. "Sustainable development," writes sociologist Benigno Aguirre (2002, 106), "is an umbrella concept, a flag around which different constituencies can rally." Aguirre reviewed work on sustainable development in several academic disciplines and found a surge of work on the topic during the late 1980s and 1990s. In part, discussions about urban sustainability stem from international policy debates about climate change, globalization, and economic growth. Attention was focused on sustainable development by the United Nations World Commission on Environment and Development (also known as the Brundtland Commission). *Our Common Future,* the Commission's report released in 1987, defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987, 43). Later, the United Nations Conference on Environment and Development, meeting in Rio de Janeiro Brazil in 1992, released *Agenda 21,* a set of recommendations to guide countries and local governments in their sustainable development efforts. Since these global events in the early 1990s focused attention on the environment and local development, cities around the globe have engaged in new planning and policy development, reconsidering the links between physical growth, the local economy, social conditions, and environmental quality (Betsill and Bulkeley 2007; Dale and Robinson 1996; Garcia-Sanchez and Prado-Lorenzo 2008; Mazmanian and Kraft 2009). As local governments learned more about their potential policy contributions to global environmental and climate change efforts, international policy networks developed to diffuse best practice advice to cities around the globe (Bulkeley 2005; Bulkeley and Betsill 2003).

Cities undertake urban sustainability initiatives for several reasons. First, cities face risks from global climate change. Some city governments have voluntarily committed to the reduction of greenhouse gases (GHG) and other environmental pollutants. Over one thousand mayors in U.S. cities have signed the U.S. Conference of Mayors Climate Protection Agreement, an initiative spearheaded by Seattle Mayor Greg Nickels to reduce greenhouse gas emissions starting in 2005. Studies show that cities with higher risks from extreme weather events, higher projected temperatures, and in closer proximity to coastal areas are more likely to sign voluntary climate agreements (Zahran, Brody, et al. 2008; Zahran, Grover, et al. 2008). Some cities, including Portland, Oregon, stand out as leaders in climate policy. Boasting the nation's first climate action plan in 1993, Portland reported CO_2 emissions below 1990 levels in 2007 despite population growth, and set the ambitious goal of an 80 percent reduction by 2050 (Slavin and Snyder 2011). Yet, in his recent

book *Hot: Living through the Next Fifty Years on Earth,* journalist Mark Hertsgaard (2011) explains *adapting* to climate change will be a major challenge for the world population in the foreseeable future, even if radical action is taken to curb any human contributions to the process of global warming. Baltimore and other cities will have to cope with the consequences of rising sea levels, higher temperatures, and changing weather patterns. Some cities proactively seek out information about the consequences of climate change for their localities in order to chart out plans to adapt infrastructure, land use, and city operations to future climate conditions (e.g., Bulkeley and Tuts 2013; Dannevig, Hovelsrud, and Husabø 2013; Zimmerman and Faris 2011). Discussions about climate change, mitigation, and adaption may also heighten the awareness of city officials and the public to the relationship between the environment and urban living conditions.

Baltimore conducted a greenhouse gas emissions inventory in 2010, reporting 7,579,144 metric tons of CO_2 emissions per year, the majority of which come from buildings and facilities. The city's 2012 Climate Action Plan included thirty-seven action items to enhance climate quality in Baltimore and the 2009 *Baltimore Sustainability Plan* set a target of a 15 percent reduction in greenhouse gases by 2015 (City of Baltimore 2009; 2012, 41). Even with mitigation goals in place, city policymakers and community activists are thinking about how the climate poses challenges for those living in the city, including urban heat island effects. Urban heat islands can be understood as areas of higher air temperature within urbanized areas compared to nearby non-urban areas, which occur due to differences in land use and surface ground cover (Oke 1982). Stated through a simple example, on a hot July day, one can experience higher temperatures standing in an asphalt parking lot in central Baltimore than in the wooded river valley of nearby Patapsco Valley State Park. Urban heat islands draw the attention of scientists and policymakers because patterns of physical development and land use influence the scope of the heat island problem (Brazel et al. 2000; Zhou, Huang, and Cadenasso 2011). City governments have given more attention to mitigating heat and orchestrating public responses to extreme heat events in the wake of highly publicized heat waves linked to deaths among vulnerable populations, including the elderly and those with respiratory ailments (e.g., Klinenberg 2002). Tree Baltimore, a city program to enhance the urban tree canopy, uses high heat island impact, along with other neighborhood-level indicators like low existing tree canopy and high asthma rates, to guide some of their tree planting efforts in the city. Charles Murphy, the program's Greening Coordinator, explains, "Trees are so diverse in what they can improve in the environment that the sustainability of a city is really pretty dependent upon trees." Urban tree canopy expansion is one of several areas in which the city is intervening to improve environmental quality in the hope of also aiding human health and quality of life.

Second, while sustainable development sounds like an expensive proposition to some, city governments are thinking about sustainability in order to save money and conserve resources. In the business world, sustainability is being presented as a strategy to push corporations to rethink operations, products, markets, and social responsibility (e.g., Laszlo 2008; Werbach 2009). The economic value of sustainability in city operations may be most apparent in energy conservation initiatives. While recent reports indicate that a limited number of cities are undertaking energy efficiency projects, improvements in energy-use have the potential to yield budgetary savings for cities in the short term (Francis and Feiock 2011). Energy experts in Baltimore do not need to be convinced of the economic benefits of more sustainable energy systems. Ted Atwood, Chief of the city's Energy Division reports over $10 million in yearly savings from energy improvements, including an 11 percent reduction in electricity use. The Energy Division has also been responsible for the development of renewable energy projects that generate revenue for the city. Thus, some policies advanced in the name of sustainability will cost money; other projects will help cities with their budget struggles.

Third, sustainable development informs a new vision of economic growth and prosperity for cities. Economist Matthew Kahn (2006) in *Green Cities: Urban Growth and the Environment* urges us to consider an environmental Kuznets curve—a model in which environmental degradation initially accompanies economic development. Over time, economic growth and higher incomes raise public expectations and trigger offsetting demands for environmental quality. Kahn argues growing urban economies will bring pressure for new innovations in technology and infrastructure, bolstering urban environmental quality. This argument is consistent with recent trends in post-industrial urban economic development which emphasize the desire of workers in "creative class" jobs to seek out cities with rich cultural amenities, technology, diversity, and access to leisure and entertainment (Florida 2004, 2005). Kent Portney (2013) analyzed these claims with data from major U.S. cities and found personal income growth between 1990 and 2009 was positively related to the number of sustainability projects adopted by the city governments. These effects appeared more pronounced in cities ranking high in "creative class" workers. While additional evidence is needed to study the causal relationship between environmental quality and economic growth in cities, more cities are thinking about the links between their environmental assets and their goals of attracting jobs, workers, and residents.

Some cities hope their investments in environmental quality will help them attract and grow businesses associated with the "green economy." In her recent book *Emerald Cities: Urban Sustainability and Economic Development,* Joan Fitzgerald (2010) explains that cities across the United States are recasting economic development strategies to advance

job growth in areas related to sustainable development, including alternative energy, green building, recycling, and transportation. Baltimore's existing concentration of economic activity in health and education seems complementary to the expansion of the green economy; however, our understanding of the growth dynamics of green industries remains limited (Chapple et al. 2011). Baltimore's emphasis on energy efficiency and green building has fostered programs to support green job growth. The Baltimore Center for Green Careers, a division of Civic Works which is a local non-profit organization and an AmeriCorps program, offers several programs to prepare workers for the new green economy. Their B'more Green Training Program prepares Baltimore city residents for careers in brownfield remediation and residential energy efficiency. Eli Allen, who manages Civic Works' Retrofit Baltimore program, explains that participants in the energy efficiency job training program learn soft skills, like interviewing and resume preparation, in addition to the classroom and on the job training necessary to install energy efficiency upgrades. The Retrofit Baltimore program then educates homeowners on the value of investing in energy efficiency and connects them to contractors who hire graduates from their training program. "What we are trying to do is to make sure that as we move to this green economy . . . we are also . . . creating pathways out of poverty for folks who have almost been locked out of jobs in the fossil fuel-based economy," explains Allen. "We see this huge new opportunity. As we create new markets and new sectors that are focused on sustainability, we can also make sure these jobs are inclusive to everyone," he continues. "That's a level of economic sustainability that's been missing thus far in our economy."

Through efforts of organizations like the Baltimore Green Currency Association, discussed more in chapter 3, local businesses and consumers are also becoming more aware of the economic power of spending dollars locally with Baltimore-based businesses. During research interviews conducted for this book, actors working in economic development frequently highlighted that Baltimore is a "city of neighborhoods" and a city small enough for key players within particular business sectors to be closely connected on a regular basis. Frequent social interactions may help businesses and organizations leverage their collective resources for mutual gain. The Farm Alliance of Baltimore City, a network of urban farms working together on branding, growing practices, and retail sales, exemplifies this type of cooperation, and is described in chapter 4. Understanding the economic growth associated with urban sustainability requires us to look beyond traditional economic development approaches like the recruitment of large industries and corporations in order to better understand how cities are building on established business strengths and environmental assets (Blakely and Leigh 2010).

As cities pursue economic growth, considerations about social equity are being linked into the dialogue about urban sustainability. In the

move to the green economy, minority owned businesses and entrepreneurs may be underrepresented (Harper-Anderson 2012), an important policy concern for Baltimore, where black residents make up over 63 percent of the city population (U.S. Census Bureau 2013). With a 10 percent unemployment rate in early 2013, and with 22.4 percent of city residents in poverty, an economic development strategy must include but also go beyond the green sector of the economy (Bureau of Labor Statistics 2013; U.S. Census Bureau 2013). Scholars in urban planning, political science, and economic development have pushed us to think about how the benefits of economic growth are spatially and socially distributed within cities (Bennett and Giloth 2007; Fainstein 2000; Imbroscio 1997; Swanstrom 1985). Advocates of community development encourage the targeting of policies to lift up neighborhoods that have been neglected by economic development plans that target growth in the downtown core. While city governments engage in community development strategies, non-profit organizations committed to specific neighborhoods or community problems also enter the fray (Rubin 2000). Neighborhood-based organizations can leverage resources from government and foundation funders in order to develop multi-pronged approaches to integrate job development with other forms of social assistance. The scope of work in the local non-profit sector appears to be positively related to the scope of a city's overall sustainability efforts (Pitt 2010; Portney and Cuttler 2010). To understand the work of building economies and sustainable cities, our analysis must take in the array of community development work that occurs in the non-profit sector and civil society organizations.

Finally, in the United States, federalism provides local governments with room for innovation to integrate environmental policy and economic development. Some scholars describe the recent subnational action on climate policy and sustainable development as a useful and welcome contrast to the political stalemate that has prevented progress on global environmental problems by national governments and international policy forums (Rabe 2007, 2011; Selin and VanDeveer 2007, 2009). Some go beyond this to say the policies for sustainable communities developed at the local level might yield the greatest potential for achieving globally and locally important goals. Reflecting on the governance of sustainability, Gilles Paquet (2005, 169) writes, "self-governance flows naturally from the principle of subsidiarity that suggests that decision-making should be located at the most local level where it can be efficiently and effectively executed, and that collaborative or higher level decision-making should prevail only when individual, local, and lower-level instances have demonstrated that they cannot do it well or at all." Cities may be in a stronger position to act on sustainable development than state or national government because they have direct control over important policy tools like land use and planning, because they operate

in a competitive economic framework that encourages them to plan for job development and economic growth, and because they are organized on a small enough scale to allow members of the public to directly participate in policy dialogue about the local meaning of sustainability.

From the earliest days of the republic, local governments have been celebrated due their creative potential to design solutions to address community needs and problems (Syed 1966). Research by political scientist Elinor Ostrom (1990, 2009) shows policy solutions for sustainability can emerge from the deliberation and work of local communities. Ostrom's work has inspired many others to study the conditions that result in collective action and cooperative problem solving at multiple scales (e.g., McGinnis 1999a,b). One important conclusion from this work is that *polycentricty,* or multi-centered governance, may do more to produce durable solutions to complex problems than arrangements derived from hierarchical or centralized decision making. If we think about our cities as complex social and environmental systems, then diverse, bottom-up approaches to policy development may help us learn more about the most effective approaches to sustainable development (Feiock and Scholz 2010; Meek 2008; Paquet 2005). These actions also have a cumulative impact. For example, a recent study of subnational greenhouse gas emission reduction strategies in the United States showed 26 percent of the U.S. population lived in cities with greenhouse gas emission-reduction targets (Lutsey and Sperling 2008). Cities are in a strong position to identify how economic, environmental, and social goals can be integrated in order to generate broad community benefits; and, different cities will develop different approaches to sustainable development. Many city governments will not act alone, but will choose to engage local businesses, civil society organizations, and city residents in efforts to innovate and adapt to global economic competition and changing environmental conditions. Whether motivated by the threat of climate change, attention to city budgets, or goals related to economic growth, cities are talking about urban sustainability and they are taking action.

A CONCEPT FOR MANY CITY POLICIES

In the United States, city governments adopt a wide array of policies in the interest of becoming more sustainable places. Political scientist Kent Portney (2003) was among the earliest to analyze the scope of sustainability efforts in U.S. cities in his book *Taking Sustainable Cities Seriously.* Portney acknowledges that sustainability will be conceptualized differently across cities, as cities develop policy in response to their unique social and ecological contexts. In short, we expect different content in the sustainability plans of Baltimore and San Francisco. Still, Portney (2003, 32) argues, "the key distinguishing feature among cities—the characteristic that differentiates more serious from less serious cities—is

whether issues of sustainability can be said to be clearly and unambigu-ously on the public agenda."

To measure the seriousness of cities toward sustainability, Portney developed an index of city action on sustainability with elements including the development of sustainability indicators, "smart growth" activities, land use and zoning policies, transportation policies, pollution preven-tion and reduction efforts, energy conservation and efficiency actions, and organizational and governance activities. Portney used the index to compare the large U.S. cities that had adopted sustainability plans. Lead-ing cities on Portney's index, like Seattle, Portland, and Denver, have taken wide-ranging action, while other cities working on sustainability, like Cincinnati, Milwaukee, and Orlando, appear to adopt only a hand-ful of relevant policies (Portney 2009). Portney's examination of the scope of urban sustainability policies in major U.S. cities has been at the top of the reading list for scholars and practitioners thinking about how cities can formulate policies to become more sustainable places. While Portney's research described the scope of urban sustainability policy and the local political conditions that may support policy change, the book also fueled a new generation of research to explore what cities are doing to be sustainable and which cities are taking action.

Investigations into the scope of cities' sustainability efforts typically embrace an operational definition of sustainability that acknowledges cities will take action on the "three pillars" of economic development, environmental quality, and social equity (e.g., Leuenberger 2006; Opp and Saunders 2013; Roberts and Cohen 2002; Saha 2009). This three-part construct is familiar to many people because of the writing of corpo-rate guru John Elkington (1994) and his articulation and popularization of the triple bottom line and 3P goals (people, planet, and profit) for corporate responsibility. Scott Campbell (1996), an urban planning pro-fessor at the University of Michigan, argues sustainable development occurs at the intersection of these three goals, and planners must use their skills in mediation and conflict resolution to help communities rec-oncile and apply these values to shape future growth. Sustainable devel-opment, argues Campbell, should prompt dialogue within a community. "The more it stirs up conflict and sharpens the debate, the more effec-tive the idea of sustainability will be in the long run" (297). In contrast to Campbell's emphasis on the process of achieving sustainable places, many planning scholars describe the examples of sustainable design that cities should pursue in the name of sustainability. Examples include Tim-othy Beatley's (2000) *Green Urbanism* and *Alternative Urban Futures* by Raquel Pinderhughes (2004). Documenting sustainable design in cities provides aspirational goals for cities starting on the path toward sustain-ability and challenges us to think differently about how urban systems work. However, cities that are not already thinking about sustainability must choose to engage in a path of policy development and change. In

the process, different community priorities will be debated, and different interest groups will assert goals and values to guide public decision making. This process of political contestation, as previewed by Campbell, brings city government professionals together with business, civil society organizations, and the public, in order to iron out definitions of what sustainability will mean in practice. Cities may import best practice ideas from other places, but these ideas will always be filtered through local political debate and policy decisions. As a result of unique discussions and different compromises among the competing values of economic growth, environmental protection, and social equity, we should expect to see varied patterns of action on urban sustainability across cities.

Similar to Kent Portney's index of cities that are taking sustainability seriously, scholars in fields from urban planning to political science have attempted to document the extent to which urban sustainability is taking hold in cities across the United States. Surveys of government officials and reviews of planning documents show that local governments incorporating sustainability principles into their planning documents seem to do so on an ad-hoc basis, selecting programs that may have "co-benefits" such as budgetary savings (Berke and Conroy 2000; Conroy 2006; Conroy and Berke 2004; Conroy and Iqbal 2009; Jepson 2003; Saha and Paterson 2008). Some cities develop climate action plans as separate documents in order to outline a strategy for greenhouse gas reduction that may or may not integrate with broader community efforts to advance urban sustainability (e.g., Krause 2011b, 2012; Sharp, Daley, and Lynch 2011; Wang 2013). Policy commitments to greenhouse gas reduction and climate change have been popularized and diffused by the work of national and international networks of cities committed to promoting the role of local governments in global climate change, such as the U.S. Conference of Mayors Climate Protection Agreement or the Cities for Climate Protection (CCP) campaign of ICLEI—Local Governments for Sustainability (Betsill and Bulkeley 2004). The visibility of these well-known networks and their focus on GHG reduction should not lead us to simply equate urban sustainability with climate change policies. Cities working toward sustainability have diverse goals, as discussed earlier, and a diverse array of local policy choices can help cities become more sustainable places.

The most recent U.S. national survey of local government action related to sustainability was conducted by the International City/County Management Association (ICMA) in 2010. Researchers asked local governments about 110 different activities, grouped into twelve categories. They report the highest level of activity in areas including recycling, water conservation, and transportation improvements. While greenhouse gas reduction seems prominent in expert discussions and academic writing about local sustainability, the ICMA study reports, "only 14 percent of respondents have determined their baseline GHG emissions, 11 percent

have established reduction targets for local operations, 9 percent have determined reduction targets for the community at large, 6 percent have established targets for businesses, and 2 percent have established targets for single-family and multi-family residences" (Svara, Watt, and Jang 2013, 25). Social equity concerns *are* getting attention from cities. The authors report, "more than 30 percent of responding local governments provide support or incentives for affordable housing, and about 27 percent provide housing options for elderly people, provide access to technology for those who do not have it, and offer after-school programs for their children" (Svara et al. 2013, 27). However, the ICMA survey does not provide us with clear insight about the extent to which these cities are considering linkages among social, environmental, and economic development policies. Within this large sample of local governments, if we asked government officials to define sustainability, many would probably offer definitions that do not highlight a direct link to global climate change. The ICMA survey affirms that local governments are taking action on environmental concerns, with high percentages of local governments reporting an expansion of walking and biking trails, energy audits in government buildings, tree planting programs, and communitywide recycling. However, we lack a clear understanding of how residents of these communities would define and conceptualize a more sustainable place to live.

Among those studying urban sustainability, concerns are expressed that cities are neglecting policies that promote social equity and justice (e.g., Agyeman, Bullard, and Evans 2003; Saha 2009). The benefits of investments in economic development and environmental quality may not be distributed evenly across a city. For example, new public transportation development may improve commutes for workers into a city's central business district, spur dense development around the transit corridor, and ease traffic congestion and reduce GHG emissions, but may not help residents of adjoining distressed city neighborhoods gain better access to jobs. As another example, investments in environmental quality improvements may not sufficiently consider the pattern of existing environmental disamenities—past land use and economic development decisions that created environmental quality problems across neighborhoods. Tensions may also exist between those taking steps to increase property values through new development and economic growth, and those who seek to maintain access to affordable housing (Hempel 2009, 47). For cities, like Baltimore, that have experienced years of job loss and population decline, remaining city residents may also harbor concerns about how city officials distribute resources to neighborhoods in decline versus those attractive to new residents. Cities that seek to be more sustainable must give attention to how economic and environmental initiatives will be implemented across neighborhoods, which can spark classic political conflicts about who gets what, when, and how (Lasswell 1936).

Equity and justice in urban sustainability sound like expensive proposi-tions, but scholars and community development activists are quick to highlight simple steps that can be taken to elevate equity goals (e.g., Bullard 1999; Davidson 2009; Hess and Winner 2007; Rosan 2012). Studying the scope of urban sustainability efforts in Baltimore provides an opportunity to expand how we think about the integration of equity and community goals with the more commonly discussed environmental and economic "pillars" of sustainability.

Just as the mix of sustainability initiatives varies within a city, urban sustainability gets more attention in some cities than in others. Some crit-ics of the surging popularity of local sustainability policies suggest that the passage of the American Recovery and Reinvestment Act (ARRA) by the U.S. federal government in 2009 created financial incentives for cities to take limited symbolic action on energy use and sustainability, even if the concept stood at odds with dominant approaches to economic development and growth in their cities (e.g., Ross 2011). Financial incen-tives from states and the federal government may prompt action in some places, but local sustainability efforts cannot be attributed to intergovern-mental pressure alone. Studies analyzing local action on climate change and green building show that city conditions explain the scope of policy action, above and beyond state-level policy effects (e.g., Krause 2011a; Lee and Koski 2012). In other words, we must look into local factors that motivate the pursuit of sustainability. Research on the adoption of sustainability initiatives yields several generalizations about the types of cities engaged in urban sustainability policies. Political scientists Susan Opp and Kyle Saunders (2013) analyzed the same 2010 ICMA survey data mentioned earlier to create an index of sustainability practices. They found cities in western states, cities operating under the council-manager form of government, the central cities in metropolitan regions, cities with higher populations, cities with a higher Democratic Party vote in the last presidential election, and more diverse cities achieved higher scores on their sustainability initiatives index. Other studies show cities with higher incomes, higher levels of education, and lower levels of inequality may also engage in more extensive sustainability efforts, though inconsisten-cies can be found across studies (cf. Bae and Feiock 2013; Conroy and Iqbal 2009; Gerber 2013; Portney 2003, 2012; Saha 2009; Svara, Watt, and Jang 2013). Additional research will be necessary to narrow down which factors best explain local action on sustainability and illuminate how specific conditions shape the politics of local sustainability. Still, two additional factors related to urban sustainability efforts—civic engage-ment and administrative capacity—deserve discussion.

First, the civic health and political engagement of a community con-sistently appear to be related to the scope of local action on urban sus-tainability. Some cities limit their sustainability planning to internal city operations, such as the installation of more efficient lighting in city

buildings. Other cities set goals for broad behavior change in the city's mass public, such as increased levels of recycling and composting by city residents. The social values and political culture of a community set a foundation for policy dialogue and expectations for the extent to which the public will engage with government in the process of becoming more sustainable (Brunet-Jailly 2008; Budd et al. 2008; Portney 2005; Saha 2009). Cities with the most extensive sustainability or climate change initiatives develop multiple approaches to including the public and stakeholder groups in the design and implementation of their work (Pitt 2010). Public engagement can contribute to urban sustainability in several ways. Cities that hope to inspire mass public action to become more sustainable will need to design structures for the public to deliberate and participate in social learning and policy change (e.g., Pierce and Dale 1999; Prugh, Costanza, and Daly 2000; Smith 2003). City residents and civil society groups can play a role in a city's sustainability efforts by learning about the city's performance on various indicators of sustainability (e.g., Eckerberg and Mineur 2003; Magee and Scerri 2012), participating in policy dialogue to shape goals and approaches to problem solving (e.g., Calder and Beckie 2011), and through direct participation or co-production in the implementation of city sustainability initiatives (e.g., Carolan 2006; Parks et al. 1981). Cities will find citizen engagement to be an ongoing challenge for sustainability, well beyond initial planning and policy design. Residents who do not already understand interconnections between local ecological conditions and quality of life in the city may be the focus of outreach efforts to bring relevant environmental science into the daily experiences of residents and inform them of their potential contributions to the city's collective goals (cf. Agyeman and Angus 2003; Bäckstrand 2003). Even residents with positive attitudes about the environment may not directly act on those values to support city policies that promote sustainability—a challenge often described as a *value-action gap* (Barr 2008; Barr, Shaw, and Coles 2011; Blake 1999). Cities with high levels of public engagement and a supportive political climate may be more supportive of urban sustainability goals, but public engagement poses an ongoing challenge and opportunity for cities seeking sustainability.

While concern about sustainability and environmental quality in the mass public is an important consideration, organized interest groups may have more impact on the extent to which sustainability is placed on the agenda in city government (Liu et al. 2010). The words *organized interest group* may bring to mind professional lobbyists advocating for policy change with a mayor or city council members. Professional lobbyists do advocate for policy in large cities, but a much broader definition of organized interest group is necessary for an analysis of economic development and environmental policy. The term *civil society organizations* may be more favorable. For example, this study of Baltimore will introduce

readers to organizations that formally advocate for policy change in Baltimore City and Annapolis (the Maryland state capital), but readers will also learn about neighborhood organizations, small groups of activists, and non-profit organizations that are shaping the city's discussion about sustainability through other channels. Organized interests can influence a city's sustainability policies because they represent constituencies concerned about specific geographic areas, such as a neighborhood or a park, or specific public goods or services, such as transportation or trees. These groups also gain influence in city policy because they can coordinate their action with groups that share their interests. Some bring resources to public problems ranging from money to volunteers. While interest group advocacy in the U.S. national government is characterized by the dominance of business lobbying, citizens groups have low barriers to entry in local politics. Researchers find the mobilization of environmental groups, non-profits, and citizen support networks at the local level is positively related to the scope of a city's action on sustainability (Berry and Portney 2013; Hawkins and Wang 2012; Portney and Cuttler 2010). Thus, when examining efforts to make cities more sustainable, we should consider both how governments work with residents and civil society to create new approaches to dialogue about growth and development, and how organized interests pressure government to be attentive to social and environmental concerns.

Second, the success of sustainability initiatives in city government also depends on the support and expertise of public administrators who will implement city programs and engage with residents and nongovernmental actors. For public administrators, sustainability is emerging as an important reform idea to be integrated into government operations (Cohen 2011; Fiorino 2010; Leuenberger and Bartle 2009). Sustainability is being discussed in graduate education in public administration, and in various professional organizations. Public administrators may view sustainability as a complement to existing theories of organization that encourage managers to be attentive to the resources and inputs necessary to maintain their organization's productivity (e.g., Pfeffer and Salancik 1978). While the environment has been viewed as a policy concern for decades (Caldwell 1963), expertise is now needed within public agencies to measure and manage the organization's interaction with the environment. Many public agencies now give attention to the environmental resources they use, their accompanying environmental footprint, and their waste streams. As a value, sustainability is being built into city government, through the establishment of independent sustainability offices or through efforts to incorporate sustainability priorities across a range of government functions. When managers take steps to integrate sustainability into city operations, incorporate sustainability in strategic planning, and measure the performance of sustainability initiatives, cities undertake more extensive sustainability efforts (Wang et al. 2012). Sustainability is becoming the

way that many organizations, including city governments, go about doing their business—a new value embedded into long-term strategy and daily operations (Laszlo and Zhexembayeva 2011; Werbach 2009).

To further understand what sustainability means within a city, we must investigate the policy discussions that occur at the intersections between civil society and administrative professionals in city government. Research on the adoption of policies related to sustainability and climate change in city government shows that cities are taking action on sustainability, and both political mobilization and administrative support help explain the scope of that action. The studies reviewed above give us a good snap-shot of the current state of sustainability in U.S. cities today. Because of the growing popularity of urban sustainability, we also have numerous descriptive policy-specific case studies to explain how an energy initiative or an urban gardening project was developed within a single city. These descriptive studies have value because they help practitioners and policy advocates learn about examples of success in other communities. However, *urban sustainability,* as a concept, appears to be linked to a wide range of independent policies. Little has been done to illuminate the political contestation that occurs within cities as they decide to take action and implement sustainability policies (though see Moore 2007; Ross 2011; Swearingen 2010). Now, we need to develop a better understanding of how the diverse scope of action on sustainability within a city, both in government and in civil society, melds together to shape a broad conversation about the city's future development. An in-depth case study of a single city can provide us with this insight; but, this requires the collection many different viewpoints on urban sustainability from a wide range of participants loosely and directly involved in the city's sustainability efforts (King, Keohane, and Verba 1994). Before investigating how sustainability has come to be defined in Baltimore, a review of some existing definitions of urban sustainability sets the stage.

DEFINING URBAN SUSTAINABILITY

With so many cities taking steps to be more sustainable and with so many scholars measuring and assessing their work, we should ask, how is *urban sustainability* being defined? Again, the United Nation's World Commission on Environment and Development (1987, 43) defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." When sustainability is attached to urban policy, definitions become more complex. Consider a few different viewpoints. Those interested in public policy tend to outline the range of public functions that can be managed in order to make a city sustainable. "Sustainable cities are those that design and manage their form of governance, economies,

built environment, transportation systems, energy and water use, food production, and waste in a manner that imposes the smallest possible footprint upon the environment," writes Matthew Slavin (2011, 2). Scientists analyzing cities as social and ecological systems tend to emphasize the environmental intakes and impacts of urban systems, as mediated by human action. For example, Stephanie Pincetl (2012, S35) writes, "For cities to become more sustainable—that is, to perpetuate themselves while requiring less inputs and creating less harmful waste products— better understandings of what cities embody, and how they are created and managed, need to be developed." Similarly, Timothy Beatley and Peter Newman (2013, 3331) define sustainability "as a holistic frame of reference for guiding city development and for helping cities do many things at once: to reduce their ecological footprints and resource needs, to deepen connections to landscape and place and to enhance livability and quality of life while expanding economic opportunities for the least-advantaged, among others." Reviewing the ecological footprint of cities, the environmental resources needed to maintain urban life and productivity, William Rees (1997, 307, italics in the original) concludes, "*no city or urban region can be sustainable on its own.*" Rees advocates policies that will enhance the generation and use of local resources, reduce the transportation of resources over long distances into cities, and he urges change in individual consumer behavior. Other writers attempt to problematize the linking of development goals with sustainability. Michael Lorr (2012, 23) writes, "Urban sustainable development is the process of developing and redeveloping urban areas in a way that will improve the urban environment and economy and promote equity or social justice." He continues, "Urban sustainability is the future goal of urban sustainable development." Finally, in their book *Just Sustainabilities,* Agyeman, Bullard, and Evans (2003, 2) choose to place an emphasis "on the need to ensure a better quality of life for all, now, and into the future, in a just and equitable manner, while living within the limits of supporting ecosystems." These diverse viewpoints on urban sustainability can be embraced by advocates of policy change in order to advance a wide range of proposals for reform and improvement in our cities. Points of commonality can be identified across this small sample of definitions; but sufficient variety is present in the concept of urban sustainability to signal a warning for any policy advocate who seeks to move from concept to policy implementation. Urban sustainability is complicated.

As governments reconcile these conflicting viewpoints and begin to implement policies to make our cities more sustainable, we should be prepared for a certain level of controversy to emerge. In the process of translating urban sustainability into practice, cities will take steps that are inconsistent with past practices in economic development and environmental policy. The bargains and compromises of old political coalitions

will be disrupted as new groups push their way into city politics. While urban sustainability need not be ideological, the empirical studies cited earlier suggest that it is more likely to be embraced in more liberal cities. Sustainability is becoming polarized in U.S. political rhetoric. The link between urban sustainability and climate change mitigation makes the concept an easy target for groups that foster skepticism about the scope of environmental problems (Jacques, Dunlap, and Freeman 2008). Several state legislatures have considered legislation to limit the extent to which sustainability goals can be inserted into public policy (e.g., Celock 2013). While the opposition to sustainability in cities may not reach this same scale, some will dismiss the idea as a passing fad and city governments will be faster to adopt some policies than others. At the same time, advocates will grow impatient because, in their view, governments are not doing enough or they are not doing the right things. Concerns will be expressed that sustainability has lost meaning and is not spurring enough change in mass public behavior (Barr 2008; Parr 2009). The political contestation that will occur in cities as they define and implement urban sustainability for themselves makes this concept worth careful investigation. By studying urban sustainability, we not only gain insight into how our cities may approach their economic, social, and environmental futures, but we also have the opportunity to witness the difficult transition from idea to policy implementation.

The complexities associated with defining *urban sustainability* may be an asset for policymakers. In his book *Alternative Routes to the Sustainable City,* Steven Moore (2007, 223) writes, "No single path of action prescribed by abstract model or lists of best practices guarantees success in the elusive pursuit of sustainable urban development." He continues, "sustainability tends to show up in cities that become self-conscious and practiced in constructing, merging, and reconstructing their own story lines." Moore advocates for a process of abductive reasoning in local planning, in which hypotheses about how a city can become more sustainable are generated based on local knowledge and keen observation of urban conditions. The case studies of sustainability in Moore's book— Austin (U.S.A.), Curitiba (Brazil), and Frankfurt (Germany)—show different political conditions and processes of contestation yield urban design choices that move each city toward sustainability in different ways. The contestation of ideas, especially ideas related to collective societal problems, is fundamental to self-governance and is frequently carried out in local communities (McGinnis and Ostrom 2012; Ostrom 2006). A deeper understanding of urban sustainability can be developed by examining how the local political dialogue within cities is conducted and how local actors reach different conclusions about the competing policy priorities that could advance sustainability (cf. Connelly 2007; Meadowcroft 2004; Paquet 2005; Prugh, Costanza, and Daly 2000). Rather than seeking pristine academic definitions of urban sustainability, examining

how urban sustainability is discussed within individual communities is a critical next step for scholarly research (Krueger and Agyeman 2005). We need a deeper understanding of the politics that accompany the implementation of urban sustainability policies.

This research moves forward with the optimistic assumption that the concept of *urban sustainability* has value. Political scientist John Gerring (1999) provides criteria against which the "goodness" of concepts can be evaluated. He argues the formation of good concepts involves tradeoffs among these criteria. Urban sustainability shows some signs of conceptual weakness, but measures up well on other criteria. Urban sustainability is now a *familiar* concept in urban policy circles. While the concept might not have salience with the mass public, the process of studying urban sustainability in Baltimore revealed a general familiarity with the idea by actors involved with a range of urban policy concerns. While not everyone interviewed in Baltimore reported direct interaction with the city government on sustainability efforts, almost all were familiar with the city's Office of Sustainability or *The Baltimore Sustainability Plan* issued in 2009. Evidence of the *resonance* of the concept around the United States can be found in the many advocacy and professional organizations that now offer training or resources related to urban sustainability, including the International City/County Management Association, the National League of Cities, and the United States Conference of Mayors. The concept currently has power and relevance with officials working in local government and in their professional organizations. The wide use of the concept in urban policy may relate to its *depth*. Gerring (1999, 380) explains, "The utility of a concept is enhanced by its ability to 'bundle' characteristics. The greater the number of properties shared by the phenomena in the extension, the greater the *depth* of a concept." The scope of properties associated with urban sustainability is made clear by the range of public policy considered in sustainability plans by city governments— the concept touches concerns ranging from poverty to carbon emissions. Finally, urban sustainability has *theoretical utility*. By thinking about the meaning and implications of urban sustainability, those working in urban policy are rethinking the complexity of urban problems, updating their understanding of cities, and changing their models of work.

Scientists and scholars may not reach a consensus on what a city must do to be sustainable and politicians and bureaucrats in city halls may have an equally difficult time discerning what urban sustainability means for their communities. Yet, given the diversity of initiatives that communities might undertake in order to be more sustainable, for major cities, the likelihood of total inaction on urban sustainability seems to be shrinking. Rather than scrutinizing definitions or providing another list of best practices for cities to consider, our time can be spent better by investigating the policy dialogue and cooperative interactions that emerge within communities in order to advance the cause of sustainability. Studying the

local politics of urban sustainability in Baltimore gives us an opportunity to consider how coalitions form and make progress on various problems linked to their understanding of what it means to make the city sustainable. Looking inside one city's discussion about sustainability helps us to understand how urban sustainability is locally defined, and how relationships form to implement specific programs.

The approach to investigate urban sustainability used here in Baltimore can be applied in other cities, large and small. Those who hope to make cities more sustainable would benefit from developing sensitivity to what the words *urban sustainability* mean in the context of specific cities. As civic communities, cities engage in ongoing policy debates about the meaning of a sustainable future for the community. Some of these conversations occur at the spurring of city governments, as professional facilitators create structure for public input on formal sustainability plans. Many more of these conversations occur as nongovernmental actors with interests in environmental policy or economic development exchange ideas with sympathetic audiences. Diverse and complex discussions about the future of the city lead to a nuanced definition of urban sustainability for a city—a policy definition that is not equally shared or understood by all participants in the debate. Actors who hold a common definition of urban sustainability then take action by advancing specific programs to improve the city. These actors may be located in city agencies, but they are also found in community based organizations, private firms, and loose cooperatives of city residents working on their common concerns about sustainability. These actors form connections not simply to discuss a sustainable city, but also to implement concrete initiatives. At times, city governments may be the most visible actors advancing sustainability due to their power to convene people, issue plans and formal documents, and change policy. However, a review of sustainability plans for major cities in the United States shows that city governments are keenly aware that city governments working alone will not make progress toward urban sustainability (Zeemering 2012). In order to better understand how cities approach urban sustainability, attention must be given to how actors contest the meaning of urban sustainability within their city and how actors engage in cooperative problem solving and program implementation. By giving more attention to these two sets of activity, this book offers a policy network theory of urban sustainability.

A NETWORK THEORY OF URBAN SUSTAINABILITY

For urban policymakers, debates about the meaning of *urban sustainability* may seem fatuous. Policymakers and administrators in local government see the relevance of urban sustainability for their communities and are taking action, regardless of how the term is defined. Yet, taking

time to explore the meaning of *urban sustainability* is not just an exercise of consequence for social scientists. Urban sustainability is being inserted into urban policy dialogue around the country because the concept has the power to disrupt existing understandings of public problems and shape new stories about who is harmed by and who benefits from existing public policies. Urban sustainability helps actors frame how we think about public problems by raising the salience of certain considerations over others (Chong and Druckman 2007). For example, new retail development in the city may be viewed as an economic benefit due to the accompanying jobs and tax revenue, but advocates of urban sustainability might raise questions about how the development ties into existing public transportation networks, reducing the potential for increased vehicle traffic and making jobs accessible to members of the local community.[1] Urban sustainability draws attention to environmental and social criteria against which economic development discussions of the past might not have been evaluated (Blakely and Leigh 2010). As these discussions occur and as new actors enter the political process because of a concern about urban sustainability, new issues may be elevated onto the public agenda for consideration (Cobb and Elder 1972). The concept offers a rallying point around which those concerned with urban growth and development can reframe existing policy discussions and push for new initiatives.

For urban policy, sustainability pushes actors to create new theories or explanations about the conditions that must be in place and the actions that must occur for a city to achieve a certain level of prosperity and quality of life. Urban sustainability prompts cities to take a long-term intergenerational view and consider policies that might yield immediate costs and delayed or diffuse benefits. Under these conditions, suggests James Q. Wilson (1980), an entrepreneurial politics may emerge in which policy advocates undertake the costs of organizing political action in order to advance what they view as the broad public interest. Policy entrepreneurs concerned with urban sustainability offer new explanations for the causes of existing urban problems and also foster new ideas about the processes necessary to change and improve the city. Causal theories of public policy problems are important, explains political scientist Deborah Stone (1989, 295), because they can empower specific actors to fix problems and because they can create new political alliances. *Urban sustainability* is powerful in Baltimore and in cities around the globe, because the concept fosters the rethinking of causal theories of urban problems. With a focus on urban sustainability, new actors have felt empowered to enter the public debate about the city's problems and coalitions form to translate ideas into public action. Thus, understanding what *urban sustainability* means in the context of one city is helpful because the local definition of the concept can help us map out patterns of politics and policy advocacy.

In order to understand the meaning of urban sustainability in Baltimore, this research examines how public and governmental actors come together to understand how urban sustainability is relevant to addressing the complex public policy questions facing the city. In *The Public and Its Problems,* John Dewey (1927, 15) explains, "The public consists of all those who are affected by the indirect consequences of transactions to such an extent that it is deemed necessary to have those consequences systematically cared for." Dewey's concern about the public recognition of common problems is central to contemporary discussions about sustainable cities. The consequences of some public problems are immediate and obvious to the public. Trash and litter on city streets are apparent to the casual observer. Underlying this problem may be multiple causes; but, the consequences of littered streets are a shared concern among many groups. While city residents, developers, environmentalists, and public health experts may have different interests in addressing this problem, the clear consequences create incentives for dialogue and collective problem solving. Thus, our effort to define urban sustainability may begin with an assessment of the areas in which the public has become engaged in dialogue about current development and future needs in the community. These are areas in which publics have already organized to recognize their shared problems in the city.

However, the consequences of some unsustainable conditions in cities are not obvious. For example, the prevalence of the row house in Baltimore has crowded trees and permeable surfaces out of many neighborhoods. The ecosystem services provided by a healthy tree canopy go well beyond the benefit of providing shade or aesthetic beauty to individual property owners. Yet, the problems associated with a limited tree canopy may be difficult to understand for those without a specialized understanding of ecology or urban forestry. A small cement parking pad behind a home may be a great individual asset in a city with limited parking, saving the owner time in the search for parking and adding value to the property. Even for an environmentally minded city-dweller, undertaking the cost and effort to change the parking pad to a permeable surface may not seem like a worthwhile contribution to larger efforts to curb storm-water runoff. Cities like Baltimore face many problems like these, in which the consequences of unsustainable conditions are not clear to the public.

When the shared consequences of unsustainable conditions are not obvious to the community, incentives may exist for policy entrepreneurs or advocates to make the problems and potential solutions clear to the public. In cities, locally based non-profit and civil society organizations play an important role in building the public's capacity to address collective problems and engage in dialogue with policymakers and government agencies. Non-profits and other entities filling this role are commonly labeled *intermediaries*. Acting as intermediaries, non-profit organizations

help city residents enhance their participation in politics and civic affairs, allowing them to press their demands on government more effectively (LeRoux 2007). Within a city, a select number of non-profits may receive major grant funds, placing them in a central position to influence and coordinate the work of other organizations seeking similar outcomes to improve the community (Shea 2011). While many civic and non-profit organizations will play some small role in a city's sustainability efforts, a few organizations are expected to stand out because they do additional work to enhance collective action. Xavier de Sousa Briggs (2008, 302), in his book *Democracy as Problem Solving,* labels these stand-out organizations *civic intermediaries*. He explains, "Civic intermediaries compensate in specific ways for a lack of civic capacity because of what government, business, or civil society organizations are not able, or not trusted, to do, and also—along a more temporal dimension—for process breakdowns, such as impasse, polarization, and avoidance, that thwart collective problem solving." Past studies of the environmental movement provide evidence that should lead us to believe we will find intermediary organizations working on urban sustainability. For example, The Stewardship Mapping and Assessment Project (STEW-MAP) has collected survey data on civic environmental actors in New York City in order to discern the characteristics of civic organizations working on urban environmental problems, as well as their partnerships with other organizations (Connolly et al. 2013; Fisher, Campbell, and Svendsen 2012). The nature of intermediary involvement in urban sustainability policies may vary across cities (e.g., Hodson, Marvin, and Bulkeley 2013), so we should not expect the constellation of actors in Baltimore to resemble the groups active in other cities. In Baltimore and other cities, we should anticipate that a wide range of non-profit, civic, and neighborhood organizations will engage in policy discussions about sustainability, but select organizations will stand out as intermediaries that help build capacity and coordinate public action.

Notable in the discussion so far is the lack of attention to city government and government agencies. While the work of formal government institutions is important, city governments do not have a monopoly on defining sustainability for their cities. As conveyed earlier, city governments are organizing sustainability offices, adopting sustainability plans, implementing new programs, and monitoring sustainability indicators. Some describe government action as critical to fostering the technological advancement and the scope of behavior change necessary for our cities to become more sustainable (e.g., Cohen 2011). Still, we should be cautious in ascribing to government officials too much autonomous responsibility for setting out a city's sustainability plans. Dewey (1927, 208) warns, "No government by experts in which the masses do not have the chance to inform the experts as to their needs can be anything but an oligarchy managed in the interests of the few." Dewey depicts a positive role

for experts in collecting and disseminating scientific analysis about the problems faced by society, but stresses the need to improve public debate about those collective problems. Dewey's emphasis on public understanding is regularly cited by advocates of sustainability who believe public engagement with urban problems can yield more innovative and adaptive approaches to managing our collective affairs (e.g., Prugh, Costanza, and Daly 2000, chapter 5). An inquiry about a city's definition of sustainability should not confine itself to city agencies, but should look for points of interaction between government and civil society. To visualize these points of intersection, political scientists invoke the image of the policy network.

When many different actors or organizations work on solving complex policy problems, their collective interactions are often described as an *issue network*. The image of the issue network emerged from the analysis of interest group involvement in U.S. national politics. Early studies of interest group influence on public policy depicted very tightly coupled relationships among the federal agencies responsible for implementing policy, the congressional committees with policy responsibility over those agencies, and the special interests for the industries or sectors most impacted by those agencies (Truman 1951; Ferejohn 1974). While this was an accurate description of policymaking in some areas, many issues on the public agenda were not so insular. Counter organization occurs in politics, and for a certain number of issues, multiple organizations will lobby government and press for different policy outcomes (cf. Baumgartner et al. 2009; Lowi 1979; Schattschneider 1960. Because myriad organizations may be concerned with a particular policy question, scholars came to use the words *issue network* or *subgovernment* to describe the patterns of interaction that occur among various governmental and nongovernmental organizations about a particular policy question (Berry 1989; Heclo 1978). The image of a web or a network was viewed as a better analogy for the complex array of interactions that occur among organizations when public policy is developed.

Issue networks can be thought of as the arena in which public policy ideas are debated, positions are advocated, and official governmental decisions are shaped. The issue network and subgovernment models have been used to describe and analyze political conflict in environmental policy at multiple scales, and in urban development. Environmental policy problems are sometimes categorized as "wicked" problems—problems with no easy solutions, with causality intricately linked with other problems, and problems which are highly contested (Rittel and Webber 1973). Network thinking can help policy analysts better understand wicked environmental policy problems through a process of mapping out interdependencies among actors, their beliefs and positions within the policy conflict, and barriers to potential action (Koppenjan and Klijn 2004; van Bueren, Klijn, and Koppenjan 2003). Similarly, the

subsystem model has been used to better understand urban community development because the constellation of actors involved in policy shifts and changes over time, resulting in the emphasis of different problems and approaches to community change (Goetz and Sidney 1997). Urban sustainability involves overlapping issue networks composed of actors working on economic development, environmental policy, and social policy. Because of the multi-issue character of urban sustainability efforts, we can expect different networks to form around different sub-issues in the city's broad sustainability agenda. Some actors may engage in action on multiple issues, while other actors advocate for only a single issue. Some actors will form ties with many other organizations in order to advocate with city government and implement public programs, while other actors will interact with city government but few others.

The issue network is a useful image to think about the patterns of interaction of actors interested in policy development, but the image does not offer a clear theory about how policy change occurs. The Advocacy Coalition Framework (ACF), a popular theory of the policy process, prompts researchers to investigate not only the coalitions that form to advocate for policy, but also the belief systems that hold together the coalitions and animate their advocacy (Sabatier 1988; Sabatier and Jenkins-Smith 1993; Weible, Sabatier, and McQueen 2009). Coalitions of actors advocate for policy because they hold and share a common core set of beliefs about a policy problem. Over long periods of time, individual actors may alter their beliefs and coalitions may shift, resulting in policy change (e.g., Ingold 2011). Research on urban sustainability could benefit from integrating these insights from the ACF framework. While the framework as a whole is not applied in this investigation, we borrow the emphasis on understanding actors' beliefs about policy from the ACF. Because urban sustainability is complex and not easily defined, organizations will likely emphasize priorities for action. While we cannot talk with every non-profit, neighborhood organization, and city agency that might be interested in sustainability, we can interview a diverse range of actors involved in urban sustainability and ask them to identify their priorities for public action. If we carefully measure how actors define urban sustainability, then we can begin to assess the diversity of local perspectives on the action necessary for a city to become more sustainable.

Knowing how individual actors view urban sustainability is helpful, but if we hope to understand policy implementation, then we should also investigate how actors coordinate with others who are also working on urban sustainability. The *issue network* is a useful conceptual tool for studying policy advocacy, but research in policy implementation also uses network models to explain the complex patterns of multi-organizational activity undertaken to implement public programs. At times, formally organized public management networks are established so that multiple organizations can formally coordinate on program implementation

(e.g., Agranoff 2007; Koontz et al. 2004). Alternately, actors may work together on a case by case basis as they find a need to coordinate with other organizations in order to achieve their goals to affect change in the city. Rather than artificially limiting the types of relationships that we will define as implementation networks, actors can simply be asked to identify the organizations, governmental and nongovernmental, that they work with on a regular basis for programs related to urban sustainability. If policy beliefs help structure coalition activity, then the network patterns of working relationships on urban sustainability should be explained, in part, by commonly held views about urban sustainability.

Social scientists use a set of analytical techniques known as social network analysis to study the structure or pattern of relationships among actors within a social system (Knoke and Yang 2008). Social network analysis allows researchers to inventory and then visually graph the connections among actors within a social system. Researchers can calculate various measures to describe the network's structure and characteristics. The appendix provides a more technical description of how social network analysis is used in this investigation. Social network analysis is an ideal tool to study sustainability policy in Baltimore. By asking actors participating in local sustainability programs about their regular interactions with others, we can begin to identify the programmatic areas in which sustainability work is concentrated in the city. This approach to studying policy not only satisfies our curiosity about what sustainability means in Baltimore, but also can provide organizations working on this complex policy problem with new details and insights about where resources and action may be concentrated, as well as which organizations play central leadership roles in the local sustainability debate (Provan et al. 2005).

By measuring how actors define sustainability *and* measuring their patterns of interaction with others who are working on urban sustainability, this case study of Baltimore builds on existing scholarship to provide a more complete picture of how cities implement sustainability programs. A network theory of urban sustainability directs our attention to the interaction of how a policy problem is defined and understood by actors within a community, and how actors form connections in order to advance and implement programs consistent with their definition of urban sustainability. By addressing the links between policy definition and implementation relationships, this study can advance our general understanding of urban sustainability and can serve as a model for similar policy analysis in other cities.

URBAN SUSTAINABILITY AND CITY POLITICS

Cities perplex us and elicit our curiosity because they are the locus of diverse human activity and the site of competition for competing visions

for the future. Because of this, political scientists and policy analysts have explored a wide range of important theoretical questions in the context of urban politics. This investigation into urban sustainability in Baltimore emphasizes the importance of policy definition and its relationship with the organization of policy networks around urban sustainability. Still, as they are reading, those who care about urban politics might think about Baltimore's efforts to be sustainable in the context of other questions about urban politics and policy. Three of these questions are simplified and outlined here and are considered again in the concluding chapter.

First, can actors concerned about urban sustainability influence city policy? Sociologists and political scientists studying city government have debated and advanced various theories to explain how different actors influence decision making in city government. A series of community power studies during the 1950s and '60s debated the exercise of influence in urban decision making, motivated in part by concern about the concentration of power in the hands of small elite groups in society (e.g., Domhoff 1978; Hunter 1953; Mills 1956). Robert Dahl's (1961) classic study of urban politics, *Who Governs? Democracy and Power in an American City,* advanced the notion that pluralism best describes the exercise of power in city government. Different activities in the city, like public schools and urban redevelopment, appeared to be influenced by different sets of actors in city politics. The possibility of the pluralistic exercise of power in cities offers hope that collective decisions can be influenced through the political organizing that might occur in small democratic communities. For our investigation of sustainability in Baltimore, a pluralist theory of urban power holds that small non-profits and neighborhood groups have the potential to influence the direction of city policy. While Dahl's work shaped the empirical study of community power, the pluralist perspective on influence in urban politics was not strongly embraced. Subsequent writers on power observed that certain issues are systematically kept off the public agenda, or larger power structures in society prevent some issues from even being considered (Bachrach and Baratz 1962; Lukes 1974). In urban politics, Clarence Stone's (1989) analysis of urban policy in Atlanta contributed to the development of urban regime theory, which holds mayors and policymakers in city governments are constrained in their action by the need to coordinate public action with major business and civic leaders in order to maintain their support and investments in the community (Mossberger and Stoker 2001; Orr and Johnson 2008).

Second, in a global economy, urban policy appears to be heavily influenced by neoliberalism, a philosophy that prompts cities to adopt a tax and regulatory climate that is amenable to the attraction of mobile capital (Hackworth 2007). Can cities make progress toward urban sustainability while influenced by neoliberal thinking? Cities are engaged in economic competition for visitors and for residents seeking amenities

ranging from cultural institutions to open space (Clark 2004; Eisinger 2000). For policymakers occupied with their city's economic competitiveness, the economic dimensions of sustainable development may be heavily weighted. The provision of housing and office space built to LEED standards will be embraced, to the extent that the market demands these facilities. (LEED stands for Leadership in Energy and Environmental Design, and is a set of building and design standards outlined by the U.S. Green Building Council.) Park infrastructure will be improved where the investments enhance surrounding property values. Bike lanes and pedestrian infrastructure will be enhanced in neighborhoods selected by young and mobile professionals whom the city must retain through competition with surrounding suburbs and other major urban centers. Michael Lorr (2012, 20) labels this approach to sustainability "free-market" greening. Neoliberal urban policies stand at an interesting tension with urban sustainability because their aims are sometimes in conflict and sometimes complementary. These tensions will be revisited through the course of analyzing sustainability in Baltimore and again in the concluding chapter.

Finally, will city governments adopt policies that enhance social equity? Paul Peterson's (1981) influential book *City Limits* outlined serious constraints limiting the potential for local governments to engage in redistributive policies. Cities must make careful decisions about how they spend tax dollars, especially in the wake of the major economic recession that pushed city budgets downward starting around 2008. In Peterson's view, businesses and residents may be tolerant of city spending that enhances the infrastructure they use on a daily basis or that maintains basic operations like police and fire services. However, cities are limited in their ability to engage in redistributive spending for things like human and social services because if these policies push local tax rates higher, mobile residents and businesses can exit for lower taxing jurisdictions. In a federal system of government, city governments in the United States can seek out state and federal funding for redistributive spending, so cities do provide a range of equity enhancing services ranging from homeless services and job-training to subsidized public transportation for students and the elderly (Craw 2006). Still, for Baltimore City, tax rates and budget concerns loom large. As discussed in the next chapter, the city's real property tax rate of $2.248 per $100 of assessed value in 2013 places the city well above its neighboring suburban counties. While various actors link equity concerns to sustainability in Baltimore, some urban policy analysts will question the extent to which the city can afford equity enhancing policies.

These are all important questions, but the main goal of this research is to open our eyes to the range of viewpoints held within one city about what must be done in order to be a sustainable city. We also seek to understand how actors' definitions of urban sustainability relate to the patterns of their working relationships with other actors to implement

programs that enhance sustainability in Baltimore. In the next chapter, the development of *The Baltimore Sustainability Plan* of 2009 is discussed. The chapter outlines the city's central sustainability goals, as articulated in this important document, and provides context from interviews with key city staff, policymakers, and members of the city's Commission on Sustainability. The chapter then reviews a series of indicators or measures that might be considered when assessing the city's progress on sustainability. Chapter 3 explores the question, "What are the most important things Baltimore can do in order to be a more sustainable city?" Through in-depth interviews, eighty-five different actors in Baltimore explained their work on sustainability and offered their personal thoughts on what Baltimore can do in order to be more sustainable. During each interview, each person completed a Q-sort exercise. This is one method for comparing how different individuals view a concept, like urban sustainability, that has an unclear or contested meaning. The analysis of this data shows three distinct views on how Baltimore should pursue urban sustainability. The chapter explores each viewpoint while also describing the work of many interesting organizations, agencies, and activists. In chapter 4, we explore the extent to which common definitions of sustainability are held by actors who work together on sustainability efforts in the city. Social network analysis is used to illustrate clusters of actors working on sustainability in the city. In addition to investigating the networks associated with each of the three definitions of urban sustainability that were identified during this research, special attention is given to the policy definitions held by actors who report working with the city government and important intermediary organizations in the city. Chapter 5 reviews the importance of investigating how local actors within a city define sustainability and outlines several strategies for enhancing collaboration on urban sustainability goals. These strategies are based on the insights of the actors in Baltimore that make collaborative approaches work on a daily basis. At the end of the book, readers will find a methodological appendix with additional details about the in-depth interviews, Q-methodology, and social network analysis.

Understanding how a city conceptualizes sustainability, not in the abstract, but in terms of concrete tasks for public policy, is a critical first step in moving toward urban sustainability. The pages ahead describe wide ranging action on urban sustainability in Baltimore, both inside and outside city government. By taking time to understand how local actors think about sustainability policy priorities in the city and by linking these definitions to their patterns of working relationships with other organizations, we can develop a more complete understanding of how cities are doing the work of becoming more sustainable places. The analysis in this book focuses on Baltimore, and Baltimore has interesting lessons for other cities thinking about sustainability. However, each

city must analyze and understand its own unique sustainability priorities. Urban sustainability will not be achieved by city governments alone, but through complex working relationships forged around implementing a city's sustainability goals.

NOTE

1. At the time of writing, a debate like this was occurring around the potential development of a Walmart at North Howard Street and West 25th Street in the city. Those raising concerns about the development were identified as concerned with "sustainable development" in some media coverage (Farooq 2013).

2 Sustainability in Baltimore

The Baltimore Sustainability Plan was adopted by city officials in early 2009. The lengthy policy document outlines a total of twenty nine goals under seven themes—cleanliness, pollution prevention, resource conservation, greening, transportation, education and awareness, and the green economy. Baltimore was not among the earliest U.S. cities to give attention to sustainability. The city was not ranked in Kent Portney's earliest index of cities taking sustainability seriously, but his update in 2007 ranked Baltimore at 28th out of 44 cities (Portney 2009). A year later, the online site SustainLane ranked Baltimore 10th out of 50 cities. Rankings aside, when compared to the sustainability plans of other U.S. cities, Baltimore's work is impressive in scope and content. Visible indicators of public action on sustainability mark the city. Storm drains are lined with artistic warnings that litter should be discarded elsewhere in order to protect the Chesapeake Bay and the city's water resources. Large public murals have been painted by community organizations adjacent to abandoned lots. Lots formerly strewn with garbage have been reclaimed by volunteers. Some vacant lots are being used for community gardening. Construction signs around new buildings proclaim a commitment to environmentally friendly design. New trees are being planted in blocks formerly characterized only by concrete sidewalks lining row houses on narrow streets. These are visible indicators of action on urban sustainability and more work is being done behind the scenes.

Baltimore may seem like an unlikely candidate for an in-depth study of urban sustainability. The political mood in the city for sustainability policies is not the same as in the frequently touted sustainability exemplars of the U.S. west coast—Seattle, Portland, and San Francisco. The city's long-term battle with population decline and de-industrialization leads to more frequent comparisons with rustbelt cities like Pittsburgh, Cleveland, and Detroit, cities which also happen to be working on sustainability to varying degrees. Baltimore does not brag about being an innovator in the field of sustainability, with many good ideas admittedly imported from other places. For these reasons and more, Baltimore is just the type of city that we need to study if we hope to understand how urban sustainability is defined and implemented. Kent Portney (2003, 238) writes,

Figure 2.1 Ash Street Garden managed by Baltimore Free Farm
Source: Photograph by the author

Figure 2.2 Storm Drain Stencil
Source: Photograph by the author

"If efforts to achieve sustainability through cities in the United States are to succeed, then greater attention will need to be paid to defining the conditions under which the most needy cities can take the idea seriously." To expand our understanding of urban sustainability, we need to investigate the politics of sustainability in a much wider range of cities than we have already studied, because the range of cases that we study shapes our understanding of complex social problems (Geddes 2003; Gerring 2007). While several large-scale surveys have helped us understand the scope of sustainability action in U.S. cities and the city characteristics most associated with the adoption of these policies, we still lack a detailed understanding of the political processes at work, within cities, to advance urban sustainability on the public agenda. Additional case study research into policy definition and the politics surrounding urban sustainability can deepen our understanding of the dynamics that underlie policy adoption and implementation. This investigation into urban sustainability in Baltimore contributes to a growing number of single-city case studies that are advancing our understanding of the political contestation that occurs within cities as they define a more sustainable future (e.g., Ross 2011; Swearingen 2010). We can learn from Baltimore because the city faces serious challenges and because political mobilization is occurring around a wide range of sustainability goals.

To understand the status of urban sustainability in Baltimore, we begin by reviewing how sustainability came onto the city's political agenda and found a formal institutional home within city government. The details for the city's first sustainability plan, a document generated through consultation with city insiders, outside experts, and the public, are reviewed in order to show how city government has formally defined sustainability goals for the city. To understand the scope of challenges facing Baltimore in the early 21st century, we will review indicators of sustainability from the city's own sustainability documents, as well as from other measures of government performance. The chapter closes with several examples of sustainability efforts inside city government and in the broader Baltimore community. Reviewing the city government's action on sustainability sets the stage for a new inquiry into how sustainability is debated and defined in Baltimore. This inquiry seeks definitions of sustainability from a wide range of actors inside and outside of government and examines how they work together on sustainability goals. In order for Baltimore to be a more sustainable city, action by city government is critical; but government action alone is insufficient to achieve success on many measures of urban sustainability.

GETTING SUSTAINABILITY ON THE AGENDA

Sustainability is a new and emerging policy priority in Baltimore, as in many other large U.S. cities. Pinning down the origins of a public policy

idea can be challenging. Baltimore's proximity to the Chesapeake Bay, the need to grapple with an industrial past, and the emphasis on development around the Inner Harbor have made environmental protection salient in the city for some time (Ernst 2003; Horton 2003). This history is important, but we join the story when sustainability gained traction and a formal institutional home within the city's bureaucracy. Late in 2004, city council member James Kraft began to marshal support for green building standards for the city. A Green Building Task Force was organized with support from the local chapter of the U.S. Green Building Council. In 2006, the task force issued a report recommending the adoption of building standards based on the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) standards. While green building standards were initially encouraged for government and commercial buildings, the task force outlined aspirational goals to promote green building in the city's privately owned housing stock as well.

> The Baltimore City Green Building Program is not intended to be limited to public projects or commercial work alone; sustainable building practices should also be implemented in the residential sector for both private homes and publicly owned city housing. In terms of health, comfort and affordability, greening the housing in the city will have a large beneficial impact on our residents and our urban environment. (Kraft and The Baltimore Regional Chapter of the U.S. Green Building Council 2006, 12)

Beyond this, the task force recommended the establishment of a sustainability office in city government to oversee the implementation of green building standards, but also to develop broader policies to enhance sustainability in the city. The report highlighted the need for changes to patterns of water and energy use, reductions in waste, and improvements to transportation and air quality.

Peter Doo, an architect and sustainability consultant, co-chaired the Green Building Task Force. In Baltimore, Doo explains, some local developers were interested in green building before the city adopted the 2007 law that required these standards for large commercial and multi-family buildings. "Whether or not the developer has a core belief in sustainability, if they sense there is enough market interest, [then] that drives decisions."[1] Doo shares the public "appetite for sustainability" in Baltimore is not yet strong enough for developers to charge higher rents for buildings built under these standards. However, he posits green buildings may experience advantages in the time required for units to sell or rent as those seeking space may value the health and environmental benefits associated with green buildings. For Doo, urban sustainability involves more than green building. "You can build a lot of green buildings in

the context of a city and not move the needle very much, because sustainability is a lot bigger than a few green buildings," he explains. Doo, who went on to serve on the city's Commission on Sustainability, suggests the work of the Green Building Task Force was important because changes to the building code began to alter broader policy discussions about sustainability in Baltimore. He notes, "Mandates certainly begin to get everybody's attention . . . It gets people talking; it gets people doing something."

The discussion about green building opened a window through which additional policy ideas converged, consistent with political scientist John Kingdon's (1984) popular description of the policy process, in which streams of problems, solutions, and political conditions combine to bring policy problems into public focus. The report from council member Kraft and the Green Building Task Force in early 2006 included the recommendation of creating an office with responsibility for sustainability within city government. When Mayor Martin O'Malley left Baltimore to become Governor of Maryland in early 2007, city council president Sheila Dixon ascended to the Mayor's office. Mayor Dixon is widely credited with embracing sustainability as a priority for city government. Under her administration, the green building standards were passed into law, the Office of Sustainability was established within the city's Department of Planning, a Commission on Sustainability (CoS) was appointed, and the city's first sustainability plan was drafted and adopted.

The city's Office of Sustainability may be responsible for the day to day work of promoting sustainability as a value in city government, but the Commission on Sustainability serves as a link between government and the broader community. With twenty one members representing geographic constituencies in the city and a broad range of business and environmental interests, the CoS offers a window into the complexity of defining urban sustainability. Among CoS members, expertise can be found in construction, energy, environmental policy, public health, job training, and many other areas of concern to the city. Cheryl Casciani chairs the Baltimore Commission on Sustainability and works as Director of Neighborhood Sustainability for the Baltimore Community Foundation (BCF). Casciani had been working with BCF on the priorities of making neighborhoods in Baltimore safe, clean, green, and vibrant. While she had done limited work with environmental policy in the past, she recognized that the establishment of a sustainability office in city government would open new opportunities to address complex problems in city neighborhoods. She had some informal discussions with city staff and BCF provided a consultant to investigate how other cities had organized their sustainability programs. When applications were solicited for the CoS, Casciani put in her name and was picked by the Mayor to be the chair of the newly established advisory panel. Casciani explains, "People had been working on environmental, economic, environmental justice

and the whole gambit of sustainability for years. The crowd had been waiting for this opportunity to pool together and rise to a level of prominence, so people were so happy."

Casciani's work with BCF had placed her in the role of facilitating problem solving with a wide range of actors in the city. These facilitation skills were vital for the new chair of the CoS. As the CoS set to work, Casciani emphasized the values of translation, inclusion, and engagement. Translation acknowledged that professionals in government and environmental policy held concepts and vocabularies that might be inaccessible to the general public. Rather than asking experts to change how they communicate, the CoS could take on responsibility for making expert information accessible to a general audience. "Inclusion was about language," explains Casciani. "If we're going to talk about [sustainability] in the city, we couldn't just be about trees and grass, and clean air and clean water. It had to be about that; but in Baltimore, you had to be able to talk about rats and trash because those are just as important in terms of the environment." Beyond inclusion, Casciani notes, "we're going to really make a big deal about constantly engaging citizens."

The participatory values guiding Baltimore's initial work on urban sustainability are also articulated by city officials. To create a sustainability plan for Baltimore, the Office of Sustainability and the CoS created mechanisms for broad public engagement. Beth Strommen, Director of the Baltimore Office of Sustainability, explains "we agreed at the beginning to be inclusive and to engage everyone . . . We said whatever they say is sustainability is sustainability; we're not trying to tell them what it is." The city's sustainability plan brags of the involvement of over 1,000 citizens in the development of the plan. This scope of participation was achieved by organizing working groups that included members of the CoS and participants from city agencies. The working groups studied select issues, held public meetings, and developed goals and recommendations for city action. The city also recruited over thirty "Sustainability Ambassadors" to attend community meetings, present information about sustainability, and gather feedback about the city's efforts. A large sustainability forum was also held in late 2008 to bring together stakeholders to reflect on the emerging priorities and strategies. The city's plan suggests this participatory model helped the Office of Sustainability and CoS reach beyond the traditional constituencies concerned with environmental policy in city government in order to foster a much broader discussion about sustainability (City of Baltimore 2009, 19–22).

What Strommen and the CoS found were some commonly shared priorities across groups within the city which were sometimes expressed with different words. In Baltimore, sustainability is not about maintaining the status quo for future generations. Strommen notes, "the status quo in many parts of Baltimore is not very good. So they don't want the status quo; they want better." Baltimore's sustainability efforts center

on *people, planet,* and *prosperity,* because these words were found to resonate most in discussions with the community. A review of the *Baltimore Sustainability Plan* (City of Baltimore 2009) makes clear this three part emphasis. Table 2.1 summarizes the major goals outlined in the city's plan. The document identifies seven major themes with a series of goals under each theme. Each goal is accompanied by a series of strategies to explain how the city will take action on each goal. The list includes *planet* or environmental goals including doubling the city's tree canopy by 2037 and reducing greenhouse gas emissions by fifteen percent by 2015. *Prosperity* or economic goals include the creation of jobs that prepare residents for the green economy and supporting local businesses. Concerns about *people* and the residents of Baltimore are pervasive in the document. Goals such as providing recreational space within a quarter mile of all residents and improved equity in transportation highlight concerns for human living conditions. Concerns unique to Baltimore are also apparent. While many sustainability plans in major cities do not address street litter, this is the first major theme discussed in Baltimore's sustainability plan. The salient links that local actors describe between litter, cleanliness and urban sustainability will be discussed more in chapter 3.

Accountability for the implementation of the sustainability plan is described as a collective responsibility. "Individual citizens, community groups, institutions, and businesses must recognize how their decisions impact the sustainability of the community and take responsibility for responding appropriately" (City of Baltimore 2009, 26). While the document details action by government, the city's high expectations for implementation partnerships with nongovernmental organizations is clear. Each strategy in the sustainability plan is accompanied by a small graphic that describes the parties responsible for moving the strategy into action. Of the 132 strategies, seventy-one strategies list nongovernmental or community organizations as implementation agents. Nongovernmental or non-profit organizations are mentioned as key participants in incorporating sustainability into K-12 education curricula, managing the stewardship of public space, restoring natural habitats, and conducting public education and outreach efforts. In other areas, the sustainability plan acknowledges a need for the development of capacity or enhanced coordination among nongovernmental organizations. For example, under the goal of providing safe, well-maintained public recreational space within one quarter mile of all residents, the plan outlines a strategy to "create an inclusive organizational system to support stewardship in public spaces." The strategy goes on to state "Communities and non-profits often have limited capacity for purchasing equipment or expertise for the care and maintenance of adopted spaces. An organized system could be created for these groups to share information, tools, and other resources to optimize their effectiveness

Table 2.1 Themes and Goals from Baltimore's 2009 Sustainability Plan

Cleanliness
- Eliminate litter throughout the city
- Sustain a clean and maintained appearance of public land
- Transform vacant lots from liabilities to assets that provide social and environmental benefits

Pollution Prevention
- Reduce Baltimore's greenhouse gas emissions by 15% by 2015
- Improve Baltimore's air quality and eliminate Code Red days
- Ensure that Baltimore water bodies are fishable and swimmable
- Reduce risks from hazardous materials
- Improve the health of indoor environments

Resource Conservation
- Reduce Baltimore's energy use by 15% by 2015
- Reduce Baltimore's water use while supporting system maintenance
- Minimize the production of waste
- Maximize reuse and recycling materials

Greening
- Double Baltimore's tree canopy by 2037
- Establish Baltimore as a leader in sustainable, local food systems
- Provide safe, well-maintained recreational space within ¼ mile of all residents
- Protect Baltimore's ecology and biodiversity

Transportation
- Improve public transit services
- Make Baltimore bicycle and pedestrian friendly
- Facilitate shared-vehicle usage
- Measure and improve the equity of transportation
- Increase transportation funding for sustainable modes of travel

Education & Awareness
- Turn every school in Baltimore into a green school
- Ensure all city youth have access to environmental stewardship programs and information
- Raise the environmental awareness of the Baltimore community
- Expand access to informational resources on sustainability

Green Economy
- Create green jobs and prepare City residents for these jobs
- Make Baltimore a center for green business
- Support local Baltimore businesses
- Raise Baltimore's profile as a forward thinking, green city

Source: City of Baltimore. 2009. *The Baltimore Sustainability Plan*. Baltimore, MD: Office of Sustainability. Available online: www.baltimoresustainability.org/sites/baltimoresustainability.org/files/Baltimore%20Sustainability%20Plan%20FINAL.pdf.

at minimal cost" (City of Baltimore 2009, 79). Throughout the document, nongovernmental organizations are discussed as stakeholders in the city's work to become more sustainable. Nongovernmental organizations may play a role in the implementation of programs that advance the city's sustainability goals, either in partnership with government or alone.

So too, the general public's engagement is expected in order for the city to achieve success in many areas. The need for public participation in the city's sustainability efforts can be found in each section of the sustainability plan, including the discussion of goals to make Baltimore a cleaner city. The first goal in this section of the plan, "eliminate litter throughout the city," has five accompanying strategies, three of which relate to public education or changes in public behavior. The first strategy for cleanliness calls on the city to "educate residents and businesses about proper trash storage and disposal." The strategy states:

> Distribute a clear, concise, and consistent message about proper waste disposal in the City of Baltimore through a variety of outlets to all businesses, institutions, and individuals. Make this message available in multiple languages and locations so that it reaches all sections of the population. (City of Baltimore 2009, 31)

This example shows that some goals for sustainability in Baltimore almost fully depend upon the willingness of the public to think about urban sustainability and change its behavior. Fostering a concern for urban sustainability in the general public will be challenging. Even city residents with pro-environmental attitudes may find some of the behavior change sought by the city's sustainability plan to be too onerous (e.g., Barr 2008). The Office of Sustainability took active steps to engage the public in the development of the sustainability plan, but short-term involvement in a public forum is different than a long-term commitment to thinking about sustainability. City officials may be hard pressed to retain public interest in sustainability and to enlist the public's participation in the co-production of sustainability programs.

Because of this, the city is unlikely to engage individual residents on a one-on-one basis when calling for behavior change. Instead, we are more likely to see city officials reach out to the public with the help of nongovernmental organizations. Some nongovernmental organizations in Baltimore already have missions closely related to the city's sustainability goals. Neighborhood organizations and local non-profits have existing relationships with communities and residents, placing them in a stronger position than city agencies to advocate for behavior change in the mass public. As described in the following chapters, a few prominent nongovernmental organizations play an intermediary role, assembling coalitions of local organizations and residents to support programs, such as home

energy use audits, that can help bring the mass public into partnership with the city's sustainability goals.

Current and former members of the CoS acknowledge that the CoS has helped the city to make progress on sustainability, but their work also has limitations. Like most other citizen commissions, the time available for policy debate in monthly public meetings limits the number of items that can be juggled by the CoS at any one time. Staff in the Office of Sustainability is critical to the work of gathering information and assessing policy alternatives. In the wake of economic recession, Baltimore and other city governments had limited resources to dedicate to new sustainability ventures. While some limited external resources have flowed into the city, the CoS has been instrumental in aligning the resources of governmental and nongovernmental actors. Beyond chairing the CoS, Cheryl Casciani's role at the BCF allows her to coordinate financial and human resources in areas that can help complement and advance the city's sustainability goals. For example, the city's Food Policy Director was initially hired as a consultant by the BCF before being moved to employment in city government. The BCF also hired staff to help bridge work between the city's Office of Sustainability and the "green school" efforts in the Baltimore City Public Schools (BCPS). Other members of the CoS report that the city's efforts to outline clear sustainability goals have allowed them to more precisely align corporate giving and philanthropy with the city's policy goals. The formal powers of the CoS in city government are very limited, but with the Office of Sustainability, the CoS has drafted a playbook from which those concerned about making Baltimore a more sustainable city are taking their cues.

Members of the CoS consistently credit this deliberative body with two accomplishments. First, regular discussions about sustainability policies keep government and the public focused on making progress on sustainability. The CoS cannot change law or implement programs on their own, but their ability to comment on how sustainability relates to policies being debated by the city council helps the CoS elevate sustainability on the city's broader policy agenda. Second, the diverse perspectives represented on the CoS force members to debate and reconcile their own views and values on integrating economic, environmental, and equity concerns within the city. For example, with trash and litter widely acknowledged as a problem in Baltimore's streets, some policymakers in Baltimore viewed polystyrene foam containers as an easy target for policy intervention (Wenger 2013). Raymond Ehrlich, a member of the CoS, also works for Dart Container Corporation, a major manufacturer of single use food service products. "A lot of people view a product as being sustainable if it is recyclable or compostable," explains Ehrlich. "We know that there are a lot more factors to sustainability. There are life-cycle considerations about energy usage, emissions production, and waste generation." Ehrlich acknowledges policymakers may view a polystyrene foam

product ban as a symbolic environmental win, but he argues such action does not take into consideration the science behind product design and waste management, nor does a ban change the underlying human behaviors that contribute to a litter problem in the city. Baltimore's stalled debate on banning polystyrene foam containers is important because it illustrates that the CoS is a forum in which diverse viewpoints on sustainability are being represented and debated. With the CoS, Baltimore has a forum in which members of the community are taking time to learn about complex issues like waste management and consider how these issues link to the city's plan for becoming more sustainable.

As Baltimore's city government has moved from policy development to implementation, some express concern that momentum has been lost. Council member Kraft states, "I think we're behind." He adds, "We really don't view things, by and large, by how sustainable they are . . . We're not going as quickly and directly as we could." This same urgency can be heard in the voices of various activists within the community. Leadership from the mayor's office is described by many as part of the implementation puzzle. Mayor Sheila Dixon resigned in early 2010 under a cloud of scandal (Bykowicz 2010). Still, many advocates of sustainability look back on her tenure in city hall as a critical time for the advancement of sustainability on the public agenda. The succeeding and current city leader, Mayor Stephanie Rawlings-Blake, is described by many as supportive of urban sustainability, but not with the same fervor as Mayor Dixon. Advocates of urban sustainability in Baltimore tend to highlight how this priority is complementary to other policy goals in city government, especially Mayor Rawlings-Blake's goal for increasing the number of households living in Baltimore. For others, sustainability may be viewed as a competing priority for the scarce time and resources of city government. Those working in urban sustainability in Baltimore often describe a certain level of pressure to ensure that sustainability stays on the city government's policy agenda. As more time is spent lobbying policymakers in city hall, less time is available to coordinate action within the community. For Kraft, time is the main concern, because any delays on making progress toward sustainability will impact future generations. "So we have a burden and we have a responsibility to do these things, to do them right, and to do them now." For Baltimore, sorting out how much time urban sustainability goals will get from government, from the nongovernmental organizations, from businesses, and from the general public remains a pressing question.

SUSTAINABILITY INDICATORS FOR BALTIMORE

Developing measurable indicators of sustainability performance and assessing progress on those indicators over time is among the first things that most cities do when they begin discussing sustainability (Portney 2003).

Under Mayor Martin O'Malley, Baltimore City gained a reputation for being a data-driven city. Baltimore's CitiStat program required city departments to measure public service outputs and offer regular progress reports to the Mayor. This allowed O'Malley to set goals for agency progress and focus the bureaucracy's attention on moving key indicators of concern (Behn 2006). Baltimore's focus on the measurement of public services and urban problems is not unusual. Government reform trends of the last two decades have pushed public officials to measure and report progress on various empirical indicators in order to demonstrate that government action really is achieving the intended results (Behn 2003; Heinrich 2007). City governments have been keen to measure both objective measures of government performance, such as miles of streets cleaned, and public perceptions of the quality of public services (cf. Schachter 2010; VanRyzin, Immerwahr, and Altman 2008). Sustainability initiatives present challenges for city officials who are concerned with tracking performance because some things, like carbon reduction, are difficult to measure. Nongovernmental organizations have taken a lead in helping cities develop the capacity to measure and assess a wide range of sustainability metrics (Bulkeley and Betsill 2003). Cities with formal sustainability initiatives tend to report selected measures of performance through city websites and in annual publications.

In Baltimore, the Office of Sustainability tracks the city's progress on the goals outlined in the 2009 sustainability plan. Their sustainability performance measures offer one lens through which to assess the city's progress on sustainability. The city's *2012 Annual Sustainability Report* presents a dozen success stories to illustrate how the city and nongovernmental partners are making progress on the city's sustainability goals (City of Baltimore 2012). The implementation of sustainability efforts is summarized in tabular form, with reports on the status of each goal and strategy in the sustainability plan. The city's own assessment of its progress on sustainability shows areas in which progress is being made. In 2012, the city reported a thirty percent increase in the miles of streets swept over 2011. Electric use in city government buildings was reduced by four percent with a fifteen percent reduction in natural gas, compared to the prior year. Residential electricity use in the city was down 13.1 percent from the 2007 baseline measure. A slight increase in recycling was reported over 2012, but the city made significant gains in this area since introducing single stream recycling in 2009. The city reported a net increase of 4,926 trees. In other areas, the numbers present a more complicated story. For example, the city's adopt-a-lot program, which allows neighborhood gardening and beautification of vacant lots, reported 129 adoptions in 2012, a substantial decrease from the 294 adoptions the prior year. Still, the number was higher than adoptions in 2009, the first year under the city's current sustainability plan. In transportation, the city reported steady increases in the availability of shared cars through

ZipCar, but only small increases in bike rack installation and bike lane expansion. Civic Works Bmore Green Job Training expanded to train sixty two program graduates in 2012, an increase from thirty three in 2011. At the same time, the city received fewer applications for building projects under LEED or the city's green buildings standards in 2012. These indicators attest to the fact that Baltimore has focused attention on urban sustainability, making progress in many areas. Reviewing the indicators over a four year period, a cautious observer might conclude that more time is necessary to discern the extent to which Baltimore is truly making gains on becoming a more sustainable city. While single year improvements must be heralded by policymakers and administrators in order to maintain focus and momentum, the unsteady gains on some of the measures hint that more effort will be needed to move the full scope of the 2009 sustainability plan into action.

The numbers self-reported by Baltimore, or any other city government, may leave us unsatisfied that urban sustainability has been adequately conceptualized, measured, and tracked over time. The measures selected and reported by any city reflect the operational definition of urban sustainability that has been adopted by the city's policymakers and administrators. Others in the community, holding in their minds different conceptualizations of urban sustainability, might find the city's indicators to be unsatisfying or uninformative. Curious residents, neighborhood organizations, on non-profit organizations may seek data that speaks more directly to their understanding of urban sustainability. To fill this need for data, urban indicators projects have sprung up in cities around the United States, integrating wide ranging data with geographic information systems (GIS) technology to display the spatial patterns in data with maps. The Baltimore Neighborhood Indicators Alliance (BNIA), located in the Jacob France Institute at the University of Baltimore provides data and mapping services in Baltimore. They track over 110 quality of life indicators in Baltimore, including a set of sustainability indicators that include measures of community walkability, the percent of commuters who walk to work, median daily water consumption, and voter registration among many others. "Sustainability crosses a number of genres," explains Matthew Kachura of BNIA. Because BNIA is focused on a broad array of quality of life indicators, the information they collect can augment and serve as an independent third party check on sustainability indicators reported by the Office of Sustainability.

With this wealth of data, BNIA has become a resource to city government and nongovernmental organizations seeking neighborhood or citywide data for grant applications, program evaluation, or pure curiosity. As an example, BNIA is currently working with partners under a grant from the United States Department of Agriculture (USDA) to map community gardens in Baltimore. This helps the city better understand the use of vacant land within the city and can improve understanding

about the scope of urban agricultural production in Baltimore. Developing good indicators of public action is an important step in understanding if investments in urban sustainability are really making a difference. Kachura explains, "As we have scarcer resources and tighter budgets, people want to see what is being done that actually produces some sort of positive outcome. If the city is investing x dollars into helping create community gardens, at the end of the day, they are going to need something that says we actually need more community gardens, or community gardens are found in healthier neighborhoods." Only with the right data will the city be able to assess the results of sustainability policies adopted and implemented in Baltimore. BNIA obtains some of its data from city government agencies. Their ability to augment city data with other indicators and present easy to understand maps makes BNIA an important participant in any effort to assess progress on sustainability in Baltimore.

There is no doubt that careful thought is put into the sustainability indicators tracked by the Office of Sustainability and BNIA. Still, organizations are hard pressed to compile a comprehensive list of urban sustainability indicators. This problem emerges because of the diverse definitions of urban sustainability reviewed in the last chapter, and will be made more clear when data is presented about how sustainability is conceptualized in Baltimore in the next chapter. For example, in Baltimore, population is one indicator that may be central to urban sustainability for some people, but tangential for others. Populous cities have certain advantages when integrating sustainability into urban policy because their density and physical design may already advantage the efficient use of space through the clustering of work and residential life. Dense population may also provide cities with natural advantages when designing public transportation networks and encouraging mass transit over individual automobile use. Cities, like Baltimore, that have experienced industrial decline and population loss cannot capture these population advantages in the same way as cities like Seattle or San Francisco. Population loss can signal serious problems for a city, including the potential loss of revenue from property taxes as commercial and residential properties are left vacant. Baltimore's struggle with population is illustrated in Figure 2.3 which shows a steady reduction in population from the mid-twentieth century to the present. For Baltimore, this population dynamic is described by former *Baltimore Sun* journalist Antero Pietila (2010) in his book *Not in My Neighborhood*. A rapid expansion in the availability of suburban housing coupled with policies that racially segregated neighborhoods within Baltimore City contributed to a pattern of exodus from the city's core.

Mayors and city policymakers have attempted to stem the tide of population loss by supporting development around the Inner Harbor and in the downtown core. This approach to economic development
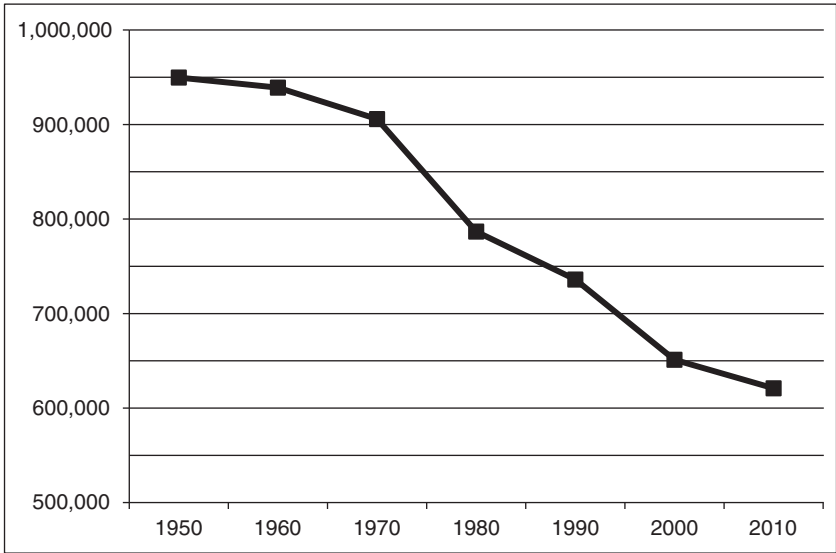
Figure 2.3 Population decline in Baltimore City, 1950–2010
Source: U.S. Census Bureau and Maryland Manual

may make the city attractive to visitors, but does not necessarily help to stabilize the city's residential population (Norris 2003). When Mayor Stephanie Rawlings-Blake was inaugurated after her first election to the job in 2011, she stated the explicit policy goal of attracting 10,000 new families to Baltimore City. The editorial page at the *Baltimore Sun* (2011), reflecting on the mayor's goal, made a clear link between population growth and sustainability by highlighting the high costs of regional population growth for suburban jurisdictions. In early 2013, the U.S. Census Bureau reported a slight uptick of 1,100 in the city's population, a symbolic victory for both the city and the mayor (Kilar 2013). Figure 2.4, a map from BNIA, shows population change in Baltimore is not evenly distributed. The city's downtown and Harbor East neighborhoods, popular with young urban professionals, seem to benefit the most from population gains and stability while other neighborhoods, especially those northeast of downtown, still show severe population loss. Even in the pursuit of population growth, Baltimore will face challenges dealing with the uneven spatial distribution of which neighborhoods benefit from growth.

While population growth in the City may spare the consumption of open space and expensive investments in infrastructure in surrounding counties, the mayor's goal of growth in the city is not always linked to Baltimore's urban sustainability goals. This disconnect causes concern for advocates of sustainability in the city who view the mayor's growth

Population Change by Community Statistical Area, 2000-2010

Percent Change:

- -31.3% to -20.4%
- -20.5% to -9.7%
- -9.8% to -2.1%
- -2.0% to 2.0%
- 2.1% to 15.5%
- 15.6% to 57.4%

Natural breaks method utilized for displaying data.
Source: U.S. Census
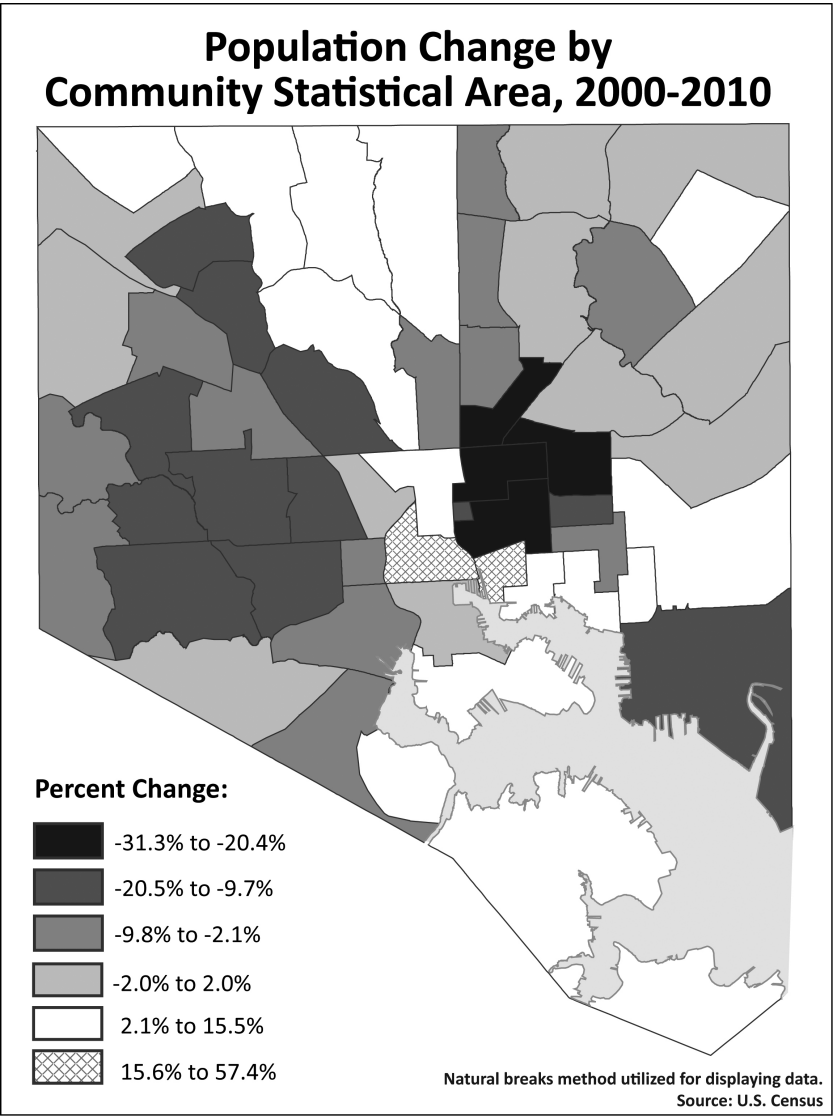
Figure 2.4 Map of Population Change in Baltimore, 2000–2010
Source: Baltimore Neighborhood Indicators Alliance – Jacob France Institute (2013), used with permission.

priority as intricately related to improving environmental and social conditions in the city. Explaining the complex connections between an indicator like population growth and the concept of urban sustainability becomes a challenge for sustainability advocates and city policymakers alike. For nongovernmental organizations working on sustainability,

explaining how their priorities relate to population growth, an indicator that has the mayor's attention, may be critical for the long-term progress of sustainability initiatives in Baltimore.

FROM GOALS AND INDICATORS TO ACTION

City government will play a central role in Baltimore's efforts to become a more sustainable city. City departments control the systems and resources required to make progress on many of the goals outlined in the city's sustainability plan. Sustainability Director Beth Strommen explains, "Each [city department] brings different things to the table that make the larger sustainability picture work." Strommen points to the Department of Housing and Community Development as an example. "They work with me and they acquire land to help with the [urban] farmers, and they help me to dispose of it, as it were, to lease it to the farmers." She continues, "They're also the agency responsible for the demolition of buildings . . . and they've been incredibly cooperative with me in looking at how to modify the bid specifications to increase reuse and recycling [of building materials]." Strommen explains that she spends time working with department heads to help them understand how sustainability goals can be complementary to the work in their departments. "It's really about educating and giving them an opportunity to shine," she explains. Strommen goes on, "The truth about sustainability is that actually it does save money." By focusing the city on various sustainability goals, Strommen argues, she can help other departments achieve their missions more efficiently, generating cost savings and benefits for which other department heads can claim credit. Strommen's description of the work of the Office of Sustainability is consistent with the sustainability advice that is being offered to managers in the public sector—make sustainability a priority for everyone inside a government organization (e.g, Cohen 2011; Fiorino 2010).

When asked about the areas in which Baltimore has made serious progress in becoming a more sustainable city, many of those interviewed for this research pointed to the city's efforts to reduce energy use.[2] Inside the Energy Division of the city's Department of General Services, Ted Atwood is quick to explain sustainability is a side benefit to the larger goal of saving the city money and generating revenue. The city's Energy Office predates the Office of Sustainability, starting its work in 2006 with transitions to LED traffic lights, lighting retrofits in city buildings, weatherization to city buildings, and improvements to heating and cooling systems. Atwood explains the office was able to use funds from the American Recovery and Reinvestment Act (ARRA) of 2009, the federal domestic spending that was intended to help the country recover from the economic recession, in order to conduct analysis on the future operation of a municipally owned utility. Energy security and reliability, explains

Atwood, may be just as important for the city's future economic growth as the energy efficiency efforts in place today. With the efforts currently underway, Atwood explains the city will exceed its energy reduction goals and may obtain up to seventy percent of the city's energy from renewable sources by 2020. The Energy Office has distributed $1.2 million in grants to nonprofits for energy efficiency programs, and intends to do this again, with resources received during the 2012 merger of Constellation Energy and Exelon, local electric utilities. Through these grant relationships, nongovernmental organizations have come to share in the city's interest in improving energy efficiency. Action that begins within city government may have important ramifications for how the city as a whole thinks about making progress on urban sustainability.

City government has also taken steps to lower barriers for the public to engage in the process of greening and improving Baltimore. Making use of AmeriCorps volunteers and funding through private and non-profit funders, Baltimore City developed a program called Power in Dirt. The program eases the process of identifying and formally adopting vacant lots in the city for the purpose of clean-up, greening, and gardening by city residents. The AmeriCrops volunteers are assigned responsibility for a certain geographic area in the city and have office space in supporting non-profit organizations. In addition to helping residents with the lot adoption process, they provide guidance to identify grant and landscape planning resources from non-profit organizations in the city. The program also helps lot adopters think about the long-term sustainability of their work, often by encouraging individuals to work in community to care for lots as a collective community asset. By improving the aesthetics of city neighborhoods and bringing residents together to care for their neighborhoods, the program may do more to enhance the social sustainability of Baltimore than the environmental improvements that come from taking care of vacant land. While the city government's role in pursuing urban sustainability will be significant, city officials do not hold all of the pieces to the sustainability puzzle. These examples from the Energy Office and Power in Dirt illustrate that the work of city government quickly intersects with the interests and participation of actors outside of government.

Too many research endeavors on urban sustainability confine analysis and prescriptions to government policies. Our understanding of sustainability in Baltimore must include city action, but must also look outside governmental programs. With the goal of exploring the diversity of definitions of urban sustainability in the city, I reached out to actors ranging from individual environmental activists to major economic development organizations. The complete list of interviews is included in the appendix, along with a discussion about interview methods. Urban sustainability is a concept for an entire city, so the recruitment of interviewees was not limited by any preconceived notions about the types

of actors who might take some interest in the subject. This allowed me to hear a diverse range of voices in the city including government agencies, non-profit organizations, activists, and businesses. Everyone whose work intersected with the idea of Baltimore being more sustainable was able to explain how their work, regardless of sector, contributed to that goal. Each person was asked, "What are the most important things Baltimore can do in order to be a more sustainable city?" The next chapter presents an approach to systematically compare their answers. For now, a few examples are worth our consideration because they illustrate the thoughtful application of a complex concept—*urban sustainability*—to everyday life in Baltimore.

When people first hear about urban sustainability, their minds may picture parks, trees, and environmental activists seeking policy change. In Baltimore, the annual EcoFest event organized by Baltimore Greenworks would both support and challenge this image. A non-profit organization focused on environmental education, Baltimore Greenworks hosts a sustainability speaker series, which brings big-name environmental speakers to the city, and Baltimore Green Week, a series of events in April promoting environmental awareness and sustainable practices. With our toddler Mason in tow, my wife Kesha and I headed to Baltimore's Druid Hill Park on a warm April Saturday to observe EcoFest, a central event for Green Week. A small cluster of tents and tables lined a pathway winding up a hill not too far from the Druid Hill Reservoir. There, we encountered images that reinforce sustainability's tight links with environmentalism. One group provided information about tree planting resources in the city. Another group was petitioning against hydraulic fracturing for natural gas extraction. The local chapter of the Sierra Club was distributing their latest newsletter. Vendors and non-profits involved in home energy efficiency were also on hand. Strolling through the exhibits illustrated the links that sustainability helps establish between the environmental and social health of the city. Information on the state's midwifery policies was available from Maryland Families for Safe Birth. Other tables offered information on health and spirituality. Games and entertainment were on hand in the park for families and children. The potential profit from encouraging sustainable action was also evident, including vendors selling backyard gardening supplies, local food vendors, and coupons for eggs at Whole Foods Market. In other words, environmental concerns play a major role in community sustainability, but even at an environmentally themed event, one can observe the participation of a wide range of actors concerned about the long-term social and economic health of Baltimore. Christina Nutile, program manager at Baltimore Greenworks, explained that this integration across a wide range of organizations should not be a surprise. She states, "historically speaking, we're the only organization that was able to start pulling together these various organizations to tie that fabric together." Nutile argues that while strong connections have

been made among organizations that care about sustainability in Baltimore, the next frontier of work remains helping the general public understand their integral role in making progress on sustainability. Events like EcoFest can serve as a bridge between the public and activist organizations working on sustainability because the event offers activities that are appealing to a wide range of people.

Urban sustainability and environmental conditions in Baltimore are also discussed by scientists and university faculty who study the city's ecological systems. Baltimore has the distinction of being one of two urban Long Term Ecological Research (LTER) sites in the United States funded by the National Science Foundation. The Baltimore Ecosystem Study (BES) is directed by Dr. Steward T.A. Pickett of the Cary Institute of Ecosystem Studies and involves researchers housed in Baltimore and around the country. Studying urban ecosystems over extended periods of time allows researchers to better understand the complex interactions between humans, the built environment, and environmental assets (Driscoll et al. 2012; Gragson and Grove 2006; Pickett et al. 2008). Sustainability became a major theme for the BES during their most recent funding renewal cycle as researchers acknowledged the growing interest in the sustainability of urban systems and environmental services within cities. While the primary mission of the BES is scientific inquiry and not advocacy, Dr. Pickett acknowledges, "It is my hope that what we do might be useful, and to that end we try to engage in regular and open conversations with people in government." Most often this involves conversations with mid-level officials in the city bureaucracy who have been working on environmental problems for many years. "What we have tried to do is to be supportive of the basic idea of sustainability, metaphorical and vague and cooptable though it may be, and to be involved in conversations with people who are making decisions about sustainability," explains Dr. Pickett. BES has been successful in getting information into the hands of relevant officials on topics ranging from watershed management to biodiversity in the city. "If you are a designer, if you are a manager, if you are the guy on the tractor in the parks, if you are sweeping the streets, everyplace you are dealing with is an ecosystem or part of an ecosystem," argues Dr. Pickett. "I think if people can really take that to heart, that's the deep core of what sustainability is."

This same interest in illuminating the connections between humans and their natural environment can be found in the region's higher education institutions. At the University of Maryland, Baltimore County (UMBC), the Center for Urban Environmental Research and Education (CUERE) assembles researchers from various academic disciplines to investigate interactions between the built and natural environment and serves as a field headquarters for the BES. CUERE also hosts a speaker series during the academic year to assemble scholars and policymakers to speak on topics relevant to the urban environment. This forum has become a resource

for individuals to learn about the urban environment from research conducted in a wide range of academic disciplines. Dr. Claire Welty, Director of CUERE, explains the environmental research and management community in the Baltimore region is collegial. While government officials in the region tend to be busy, sharing data and information in order to better understand the local environment is not uncommon. Insofar as scientific research on the urban environment can help Baltimore become a more sustainable city, the Baltimore region has a strong foundation of scientific inquiry exploring pressing environmental issues.

For neighborhood organizations in Baltimore, urban sustainability may be viewed as another chapter in the ongoing effort to maintain stability in housing values or improve neighborhood conditions. Teddy Krolik is the Environmental and Sanitation Program Director for the Reservoir Hill Improvement Council (RHIC). Reservoir Hill, Krolik explains, is a neighborhood "always on the cusp of something."[3] Close to downtown, Druid Hill Park, and the Jones Falls Expressway, Reservoir Hill's geographic location leads one to expect that the location will be attractive to those seeking a comfortable home in Baltimore City. Yet, Krolik explains, with each passing decade, certain problems persist. He argues, "It's really on us as citizens and organizers to shape the neighborhood in our own image and to do it in our own way—to give an outlet to people so that they have a voice in what their block looks like, what their streets looks like, what their parks and vacant lots [look like]." RHIC worked with residents to create a Green Master Plan, outlining environmental goals for the neighborhood. "Using public space as a way to organize and gather neighbors is a very effective tool," explains Krolik, acknowledging links to both social justice and environmental quality. By setting goals like doubling the neighborhood's tree canopy, the RHIC has obtained grant funds and worked with other non-profit organizations to create opportunities for residents to work cooperatively on the improvement of public space in their neighborhood. For RHIC, urban sustainability involves both greening the neighborhood and improving social connections among residents.

The private sector is also thinking about how sustainability will reshape work. Businesses are talking about sustainability both to improve their internal operations and to appeal to consumers who have become savvy about the social and environmental dimensions of the products that they buy. In the construction industry, sustainability is reshaping the products that businesses offer to consumers. Jake Ruppert, a local homebuilder, explains that while some homebuilders have been slow to embrace green building due to perceived costs, others have been responsive to environmental concerns as a competitive niche. Ruppert explains his firm began building ENERGY STAR Certified new homes in order to differentiate their work in a competitive market. Under the ENERGY STAR program, the U.S. Environmental Protection

Agency (EPA) outlines standards for new home construction to ensure the home achieves energy efficiency savings beyond standard construction methods. "I can't build it quicker and I can't build it less expensively; but, I can choose to build it better," explains Ruppert. When thinking about sustainability in home construction, Ruppert explains his customers seek improvements that reduce the cost of ownership of the home over time. Energy efficient appliances, heating and cooling systems, and lighting have a measurable and understandable payback period for the homebuyer. In contrast, things like low VOC paint, with a higher cost and an unclear payback, seem less likely to be requested by customers. This example suggests that where markets demand businesses to think about sustainability, some firms will respond.

Changes in the construction market also signal changes for the workers in that industry. Sustainability promises change, but the economic benefits associated with that change are uncertain. Many view the promise of new jobs in the green economy with skepticism. More likely, existing workers will be introduced to new approaches that reduce waste and improve the efficiency of their product. Edward Whalen of the Sheet Metal Workers Local 100, who is also a member of the city's CoS, explains that some members of the building trades have always been attentive to the economics of sustainability. Electricians removing wiring from a building, for example, understand the value of the waste material and sell scrap for financial gain. In other areas, sustainability has been a positive force for improvement. Air leakage in buildings was viewed as inevitable in the past, but now more steps are taken to improve efficiency in order to achieve energy savings. Whalen, however, expresses skepticism about the potential for an expansion of good paying jobs as Baltimore takes a turn toward sustainability. "You can't make a living caulking windows," he argues. "The idea that a whole lot of new jobs are going to come out of this because this is enacted or that [is] enacted, I think is a little pie in the sky. It's a good way to pitch it, and it's a feel good thing; but, the reality is that if you are looking to employ people who have had trouble with employment . . . you need more than that. A caulking gun is not a career." Instead, Whalen argues, people will need to be engaged with job training that prepares them with the advanced trade skills to conduct specialized work in the construction industry and trade professions. Even the energy performance testing of homes, he explains, requires individuals to collect and analyze information and to develop plans based on what they find. Sustainability can be viewed as a force changing work in the construction industry, but the forecast for job growth due to sustainability efforts seems uncertain.

Sustainability is also being discussed in Baltimore's coffee industry. As a commodity and consumer product, coffee brings together the economic, social, and environmental concerns of sustainability in a manner like few other products (cf. Bates 1997; Linton 2008; Oldenburg 1997).

One of Baltimore's most iconic coffee establishments is Zeke's Coffee, a small batch roastery with a distinctive coffee bean crab logo. "Our whole goal is to be Baltimore's coffee supplier of the best coffee that every man can get," states proprietor Thomas Rhodes. The business model, he explains, was built on a desire to be a local business and employ people over machines in the production process. "I think it is more personal in the end result," Rhodes explains to me at their coffee shop on the city's northeast side. "Our labels are crooked on our bags because we put them on." For Zeke's Coffee, being a local business means working with local suppliers when possible, establishing a strong retail presence at local farmers markets, and contributing waste from roasting—chaff and coffee grounds—to the Hamilton Crop Circle, a local community gardening group that is starting rooftop gardens at local restaurants. At the coffee shop, customers can use the BNote, a local currency discussed in the next chapter. Rather than disposable boxes, reusable tote bags are used to make deliveries to local accounts. Rhodes explains that through these steps, the business contributes to sustainability by keeping dollars in the local economy and by being very contentious about waste.

In the city's Hollins Market neighborhood, CUPs Coffeehouse brews and serves coffee with a different definition of sustainability in mind. Holly Shook moved to the neighborhood in order to work with young people. The neighborhood lacked good coffee options, forcing her to make regular treks to other parts of the city. Her interest in coffee collided with the work that she hoped to do with the city's youth. She established CUPs as a non-profit organization "to hire, employ, and empower at-risk youth so that they can become financially independent and become leaders within their community and families." Participants in the one-year program spend time working as a barista in the coffeehouse, provide eight hours of community service each month, and attend two enrichment classes focused on life-skill development. A sustainable city requires people to think about how neighborhoods can be strengthened. As a young non-profit, CUPs Coffeehouse does this in several ways. By providing jobs and life-skills training, young people in the neighborhood have an entry into better economic opportunities and more stable lives than they would find through other occupations on the street. A coffeehouse is also a community asset, bolstering relationships among people and even the value of neighboring properties. A neighboring landlord, Shook explains, makes sure that prospective tenants know about the coffeehouse. With job training for local youth and greater social cohesion among residents, this block of the city has a chance to do better than many of the other neighborhoods in the area, characterized by vacant properties and street violence.

Not far away, coffee is also served at Clay Pots, a neighborhood center that provides community space for education, health and wellness. They run a free coffeehouse three times each week in addition to their

education programs in literacy, art, Spanish, and GED preparation. Dwayne Hess explains the education programs at Clay Pots do the most the enhance sustainability in Baltimore, but also emphasizes the value of providing space for artists, volunteers, and members of the community to gather. Coffee is used to facilitate space for community, contributing to the development of social capital, the intangible stock of good will and social cohesion that is often described as an important factor of the civic health of cities (cf. Dilworth 2006; Rae 2003). Hess explains when people from the neighborhood walk through the doors, "there's a sense of pride that they have a place to go that's welcoming." Back in Hollins Market, Shook describes a similar reaction from the customers at CUPs. "Before we were here, there really wasn't a place where people could feel welcome or safe. We're in a neighborhood that is extremely demographically, socioeconomically diverse and there [was] not a place where everyone felt comfortable." She adds, "We bridge a gap that was dividing people, whether generationally or culturally." For many neighborhoods in Baltimore, creating social cohesion to improve economic and living conditions within neighborhoods may outweigh environmental sustainability goals. So, even in the closely related activity of selling or sharing coffee, we uncover diverse perspectives on urban sustainability.

In Baltimore, sustainability is not a policy problem to be left to government. Individuals, businesses, and non-profit organizations are taking action. Urban sustainability is an idea that is being debated and implemented, after great planning or on fly, by more than a few actors. The businesses and organizations described here have taken steps to self-consciously reflect on their role in sustaining and supporting the economic, environmental, and social health of the city. Each actor describes their contributions to urban sustainability in a different way. By collecting many different perspectives on how individual actors and organizations can contribute to urban sustainability, we build a more complete picture of the scope of action associated with urban sustainability. The next chapter uses an innovative technique called Q-methodology to explore what local actors in Baltimore believe should be done to make the city more sustainable. While this chapter closes by emphasizing the involvement of actors outside of government in the work of urban sustainability, the next two chapters will also show that there is much work for the city government to do. As we will see, the good news is that many actions to make Baltimore more sustainable are being done through collaborative action among multiple actors inside and outside of government.

NOTES

1. All quotations attributed to individuals and not separately referenced originate from research interviews conducted by the author for this project. Procedures for the research interviews are explained in the appendix.

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