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**Environmental Activism and the Implementation of Climate Policies:
A Comparative Case Study of US Cities**

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Abstract

Cities across the United States are playing key roles in pioneering climate mitigation and adaptation efforts. Not only do cities operate at a scale to which many of the impacts of climate change will be felt, but they also represent a level of governance that is most responsive and accessible to citizens. Many cities have enacted climate action plans to address climate change impacts. Despite this, climate policy implementation across local government is inconsistent, and continues to be low in many cases. There are several factors that influence a city's commitment to sustainability, however the role of activism throughout the policy-making process remains understudied. Current literature indicates a growth of nongovernmental organizations, public participation, and citizen activism in ensuring effective environmental governance, and has emphasized the need for a more formalized, institutional public participation process in environmental policy making. This paper employs a comparative case study of four U.S. cities to understand how bottom-up systems of public participation impact a city's ability to move enacted policies into implemented programs.

Introduction

Global climate change poses serious and irreversible threats to the environmental, social, and economic integrity of our society and ecological systems. However, addressing climate change nationwide has felt almost impossible. Political partisanship, differing state priorities, corporate interests, and bureaucratic red tape have largely stagnated federal-level policy measures in the United States. Despite this, local governments across the United States have taken the lead to adapt to climate change within their jurisdictions. This newfound environmental federalism emphasizes the crucial role that cities have to play in sustainable development and climate action, thus setting the stage for strengthened and improved national policy making in the future.

In recent years, several cities and towns across the country have enacted innovative strategies known as “climate action plans” to address local climate change impacts and threats. These plans devise detailed and strategic policy frameworks to meet emissions reductions goals, clean energy targets, and address related climate impacts. Despite these efforts, many cities continue to experience low rates of policy implementation; the targets and goals of the climate

action plans are seldom met, and policy enactments may take years to turn into well-operating programs. Past research has explained this discrepancy by identifying factors such as internal governmental procedures and management as important determinants for a city's sustainability. While these factors do play an important part, few studies have explored the bottom-up processes that propel and maintain effective environmental governance. Scholars and local governments alike seem to overlook the most important players in the game: people.

A study conducted by the Pew Research Center found that a majority (63%) of Americans say that climate change is affecting their local community, either some or a great deal (Tyson & Kennedy 2020). Because local governments operate at a scale that is typically quicker in responding to citizen needs, individuals have more opportunity to determine what climate measures are taken in their communities to lessen local impacts of climate change.

Environmental activism through public participation in the policy-making process therefore allows individuals and local organizations to inform local decision-making, and to make the tangible differences that may seem too daunting at the federal and global scales (where citizens often have less access).

While individual behavior or consumer decisions alone are insufficient to deal with the scope of climate change, my research examined what influence citizens have on local policy making and climate action in their communities through city climate action plans. To explore this topic, this thesis examined the role that activism and public participation play in the implementation of climate policies at the local level. Given the urgency of climate change and the vulnerability of community residents worldwide, gaining a better understanding of what conditions and processes facilitate the implementation of climate change action is key to creating

a climate resilient future. I therefore focus on the question: how does environmental activism impact the sustained implementation of local climate policies at the local level?

Based on previous literature reviews, this study hypothesized that cities with robust environmental activism and public participation processes are better able to implement their climate action plans. Furthermore, this study challenges previous claims that internal capacity are principal drivers for successful policy implementation, and instead suggests that public participation is equally important in this process. To address these questions, this study employed a small-N cross-comparative case study of four cities across the United States that have each adopted a climate action plan, analyzing their levels of public participation throughout the plan's planning and implementation process. Focusing on the extent and frequency of participation at this point of the policy-making process, rather than on the push leading to the development of the climate action plan, has the potential to provide insight for why some cities are better able to meet their enacted climate goals while others fail to do so.

The selected case studies were selected based upon their varying levels of sustainability planning capacity and policy implementation. Because of the limited amount of case studies, this research is not generalizable to all cities in the United States. Rather, a small-N qualitative study method provides detailed, rich explanations about a real-world interaction, and is used to justify whether a particular process or phenomenon exists— in this case, whether environmental activism impacts climate policy implementation and how. As the study's sample size is not a representative sample of the entire country, the selected case studies are useful for exploratory research and serves to add new knowledge on the topic for future research expansion with other municipalities, or to further analyze the relationship at state and national levels.

Literature Review

Local Climate Action

While the early environmental movement focused largely on federal and national environmental action, the late 1980s saw a shift into a new system of environmental federalism where the U.S. Environmental Protection Agency (EPA) delegated much of its policy implementation authority to US states and cities (Portney 2003). For this reason, many studies today have focused on local environmental policy making and have emphasized the need for “transformative social change” to be refocused at the local levels (Steele 2021). US cities are often at the forefront of this conversation for a variety of key reasons. First, local jurisdictions often have direct control over large sources of the nation’s emissions (Betsill, 2001; Bulkeley & Betsill, 2005); and given the growing concentration of the US population in urban areas, cities account for a large percentage of emissions particularly when focusing on the transportation sector and road transport (Gurney et al 2021). Beyond their contributions to the issue, cities, communities, and neighborhoods will also be greatly impacted by the catastrophic effects of climate change, ranging from localized flooding, increasing temperatures and urban heat, and infrastructural damages resulting from natural disaster events. Lastly, cities represent a scale that is most responsive and accessible to citizens through public participation in decision-making (e.g. town hall meetings, advisory sessions, civil society engagement, etc.), strengthening forms of environmental governance and public buy-in (Beierle & Cayford, 2002).

Despite this, there exists a large discrepancy in how cities approach and prioritize climate policy. Past studies on local environmental action have identified what factors influence city sustainability and have explored why some cities take sustainability more seriously than others (Portney 2003). For instance, it is common that citizens’ political attitudes are linked with their

governments' sustainability activities (Saha 2009; Krause 2016). Similarly, others have emphasized the important role that stakeholder involvement plays in sustainability planning (Conroy and Berke 2004), as well as programmatic effectiveness and interest group influence (Krause 2016). While these are more formal mechanisms to policy action, fewer studies exist that explore how grassroots public engagement and activism engage with climate action in local jurisdictions. One study finds that few U.S. cities possess a "robust and sustained civic capacity" in the governance of urban climate adaptation (Sarzynski 2015).

Beyond the commitment to climate action, a city's sustainability must also be measured by their policy implementation, or "the movement of policy on paper to movement on ground" (Koontz & Newig 2014). Here too, there are observable discrepancies. A study conducted by Brookings Institute finds that, despite many U.S. cities making pledges to act on climate, roughly two-thirds of cities that either enacted a climate action plan or conducted a greenhouse gas inventory failed to follow-up on their enacted plans and are lagging to meet emission reductions goals. The study recommends emphasizing implementation and community engagement as avenues for improved environmental outcomes (Markolf et al. 2020). A similar study tracked the membership the International Council for Local Environmental Initiatives (ICLEI)- Local Governments for Sustainability, an environmental nonprofit that attained 565 US municipalities to voluntarily commit to reduce their greenhouse gas emissions in 2010. The study finds that the number fell by 20 percent over the next two years (Krause et al 2016). A study on the dynamic sustainability implementation process also found that US cities have implemented 33.1 percent of enacted sustainability initiatives, reflecting a moderate level of implementation (Wang et al 2012). Given that implementation is underperforming or lagging behind pledges, it is worthwhile to see how external activism and engagement interacts with local government to achieve climate

action goals. And, while formal mechanisms are well understood, this does not paint a clear picture of all the tools available to our communities.

Environmental Activism and Public Participation

In this study, environmental activism is observed as a “function of specific behaviors,” including having environmental group membership, engaging in political action, being committed to environmentalism as a lifestyle, having potential influence on policy or management decisions, or engaging in environmental protection behaviors (Dono et al 2009). Also coined as “public participation,” “stakeholder engagement,” “civic engagement,” or “community engagement,” these concepts generally reflect the ability for people to participate through voting, expressing opinions on public issues, forming interest groups and holding public demonstrations, influencing government decisions, acting in partnership with government agencies, and mobilizing public attention to issues (Dietz & Stern 2008).

Current observations of public participation within climate action have focused on top-down approaches and the governmental duty to foster public participation. This reflects the ideas of a representative government, where “citizens have the right to be informed, conferred with, and permitted to share with decision-making authority on issues that may concern them” (Germain, Floyd, & Stehman 2001). In this way, public participation in the policy-making process is a pathway to legislative legitimacy (Gemmell & Bamidele-Izu 2002), and is necessary to uphold democratic values. If intensive enough, public participation may also shift traditional governance into “collaborative” or “participatory” governance, with a mutual and shared role between government and other participants to fulfill its mission (Sarzynski 2015). This is reflected in the US EPA’s regulations for the Resource Conservation and Recovery Act, the Safe Drinking Water Act, and the Clean Water Act:

40 CFR§25.2(b) “Public participation is that part of the decision-making process through which responsible officials become aware of public attitudes by providing ample opportunity for interested and affected parties to communicate their views...includes providing access to the decision making process, seeking input from and conducting dialogue with the public, assimilating public viewpoints and preferences, and demonstrating that those viewpoints and preferences have been considered by the decision-making official.”

Given its broad definition, not all forms of activism achieve the same goal, and there are many distinct ways in which individuals, stakeholders, and organizations influence the decision-making process. Employing a top-down versus bottom-up approach to public participation varies depending on the history, purpose, and culture of an agency, as well as the public policy issue at hand. As a result, several mechanisms have been developed to understand public participation. Dietz and Stern (2008) identified five dimensions of which to observe public participation: (1) who is involved; (2) when- at what points- they are involved; (3) the intensity of involvement; (4) the extent of power or influence the participants have; and (5) the goals of the process. Similarly, Gemmill and Bamidele-Izu (2002) claim five major roles that “civil society” should play in environmental governance systems, namely in information collection and dissemination; policy development and consultation; policy implementation; assessment and monitoring; and advocacy for environmental justice. Much attention has been placed on the planning and pre-planning phases of climate adaptation, however this study will focus specifically on observations of sustained participation throughout the implementation process, and whether the intensity of participation has influence on policy outcomes over time.

The Growing Role of Environmental Activism

Traditionally, governance— or “what the government does” to address societal problems— has been a main factor thought to influence the effectiveness of climate adaptation. However, because the management of public problems often requires outside contributions from private and nonprofit sectors, the concept of governance has extended itself beyond government

activity to recognize this multi-jurisdictional approach (Sarzynski, 2015). Literature has emphasized the growing role that non-governmental organizations are playing in environmental governance in recent decades (Ran 2012; Wang et al 2012; Gemmill & Bamidele-Izu 2002), stating that environmental activism is “pivotal to the implementation, compliance and regulation of environmental policies” (Hasler et al 2020). These “new public governance” arrangements point to the importance of non-governmental actors and civil society in decision-making and public service provisions. This is reflected in the United Nations Conference on Environment and Development, which announced in its 1992 Earth Summit that the UN system among all other intergovernmental agencies and organizations should “take measures to...enhance existing or...establish mechanisms and procedures within each agency to draw on the expertise and views of non-governmental organizations in policy and program design, implementation and evaluation” (UN, 1994; Chapter 270).

Whereas governing bodies often lack the technical capacity to fully address environmental issues or are constrained by bureaucratic and financial obligations, public engagement within the environmental policy-making process helps ensure the effectiveness of environmental governance (Germill & Bamidele-Izu 2002). It does so by encouraging multiple perspectives to create solutions that integrate all interests, and by increasing transparency, credibility, and social trust within governing institutions (Wittmer et al 2006). Additionally, a strong public participation process has facilitated social learning amongst stakeholders, playing a key role in creating connections among citizens and enables the development of group solidarity when confronting environmental problems (Ran 2012). Furthermore, the presence of public participation in the form of local activism may also act as a catalyst for policy making, because it is often outside pressure and public demand that generates needed legislative reform, tighter

environmental regulation, and the criminalization of environmentally harmful practices (Hasler 2020).

To what extent, then, does environmental governance embrace the need to engage the public in their climate action planning? There is a need for a more formalized, strengthened, and institutional public engagement process; and studies have called for more research to understand how public participation in climate action efforts may inform and improve environmental policy making (Gemmill & Bamidele-Izu 2002; Ran 2012; Sarzynski, 2015). This study therefore answers the call “for greater case study research in order to further refine participatory processes within adaptive management” by observing whether the presence of environmental activism within a city enables for more successful climate policy action throughout the implementation process (Stringer et al., 2006, p. 38). This information may help create a more responsive government that can effectively deliver public demands, while also showing individuals and civil society how to more actively engage in the formal policy-making process.

Grassroots Mobilization

The form of public participation discussed above views local government as the facilitator to public involvement. However, recent environmental grassroots movements and the environmental justice movement have refocused the power of environmentalism to the public and emphasizes collective action on environmental issues, thus broadening the traditional definitions of public participation (Ghai & JM 1995). Shifts in the interdependence among public organizations along with a lacking support for command-and-control policies has spurred efforts for collaboration (Koontz et al. 2004). A key player within this bottom-up approach to environmental governance are non-governmental organizations (NGOs). As defined by Charnovitz (1996), NGOs are “groups of individuals organized for the myriad of reasons that

engage human imagination and aspiration...to advocate a particular cause...or to carry out programs on the ground...They can have memberships ranging from local to global. More specifically, environmental NGOs are described as highly diverse with various missions dedicated to environmental protection, sustainable development, poverty alleviation, animal welfare, and other issues (Gemmill & Bamidele-Izu 2002). Today, many groups also center around climate change, resilience, and green energy.

As with public participation, NGO involvement within environmental governance systems may take many forms (Charnovitz 1996).

- *Expert advice and analysis*
- *Intellectual competition to governments*
- *Mobilization of public opinion*
- *Representation of the voiceless*
- *Service provision*
- *Monitoring and assessment*
- *Legitimization of global-scale decision-making mechanisms*

Through monitoring and assessment, NGOs are able to hold decision makers accountable for their policy decisions and promises in ways that the intergovernmental system could not accomplish in itself (Gaer, 1996). To determine the significance of NGOs one must (1) measure to what degree NGOs are able to penetrate their agenda into the intergovernmental meetings process; and (2) observe whether or not NGO proposals are influencing governments (Ran 2012). This study seeks to further explore the second category as a means to understand the impact that environmental organizations are having on sustaining climate action across US cities.

Data and Methods

Research Design and Case Study Selection

This study explores the mechanisms that move local climate action plans from being enacted to implemented. It hypothesizes that local governments with highly engaged citizens

experience higher rates of policy implementation; and that public participation is equally as important to internal capacity in ensuring implementation success. To test this, the study employed a cross-comparative case study of four US cities in the United States, all of which have undertaken a climate action plan to adapt and mitigate local climate change impacts. These cities are Chula Vista, CA; Kansas City, MO; Ashland, OR; and Carlisle, PA. Each case was selected based on two composite measures- (1) sustainability planning capacity, referring to the level of organizational capacity committed to climate action; and (2) policy implementation, the level at which previous climate commitments were put into effect through programs. It is important to note that this study does not screen for program performance or outcome metrics, but rather focuses on the tangible action steps taken towards policy implementation, such as staffing, budget allocation, and the creation of program departments.

The four city case studies were selected using the International City/County Management Association (ICMA)'s Local Government Sustainability Practices Survey of 2015, which asked U.S. local government respondents a series of questions about their sustainability-related actions. Of the 1,899 local governments that responded to the survey, 47.3% identify environmental protection as a priority. However, only 31.5% report adoption of a sustainability plan. This statistical discrepancy reflects a common trend throughout local jurisdictions in the United States, where political promises for sustainability and climate action take a long time to implement, if at all. These cities therefore serve as a crucial arena where implementation is lagging. The survey also suggests a greater need for public engagement around sustainability, with 58.6% of respondent jurisdictions stating that public participation had little to not impact on shaping sustainability plans and strategies. This indicates that the survey provides a broad range

of city involvement in sustainability and climate action, allowing for an unbiased analysis of public participation and activism.

To determine a representative sample of cities for case study selection, item-response models were estimated to create the two composite measures of sustainability planning capacity and policy implementation (DeMars 2010). These measures were not previously determined from the survey but were independently created using item response theory. Item response theory (IRT) originated in psychometrics and has been widely used in political science, psychology and education research as a means for gauging the ability of test items to accurately measure the “ability” of respondents by differentially weighting survey items based on their difficulty (Lauderdale and Clark 2014; Luo and Jiao 2018; Zaller and Feldman 1992). Because many of the ICMA survey items reflect composite measures of underlying “commitments” to policies or management practices (i.e., performance management, stakeholder engagement, collaboration), we wished to combine these items without giving each item response an equal weight. An IRT can improve measurement and reduce the complexity of data, which allows for greater differentiation between cities with varying levels of organizational traits, such as commitment to planning, policies and coordination (Deslatte and Stokan 2017). Thus, climate policy measures that are more difficult to implement (e.g. installation of solar equipment) carry more weight in the indices than less difficult measures (e.g. setting greenhouse gas reduction targets). Figure 1 shows how each case study will represent these two dimensions for cross-comparison.

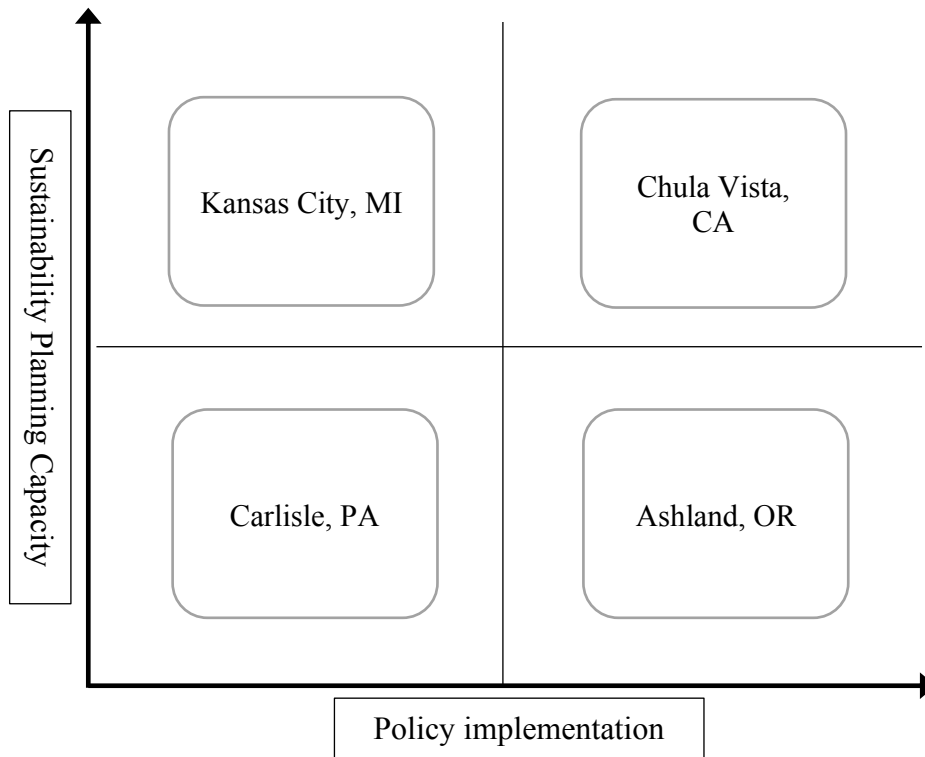


Fig. 1. Distribution of case study cities depending on levels of sustainability planning capacity (y-axis), and climate action plan policy implementation (x-axis).

Data Collection and Analysis

Case study interviews were conducted to investigate the level of activism and public participation in the climate policy planning and implementation process. An interview script was designed to gain information about the case study's climate action plan planning process, its status of implementation, barriers and facilitators to participation, and to what extent the public was engaged in the process, and how. Using this outline, four open-ended, semi-structured interviews were conducted, one for each case study city. There were six interviewees total, consisting of city councilors, local government staffers, and commissioners that were active in the respective city's climate action plan development and implementation efforts; individual names and titles will not be disclosed for confidentiality purposes. Interviews were conducted

virtually via zoom, with the shortest lasting 44:19 minutes and the longest lasting one hour.

Qualitative data from the interviews was transcribed and coded using Atlas.ti software according to the following five categories: (1) facilitators to participation, (2) barriers to participation, (3) methods for participation, (4) where participation occurs, and (5) equity considerations in participation processes.

Case Vignettes

Chula Vista, CA (*High Sustainability Planning Capacity, High Implementation*). Chula Vista is the second-largest municipality in San Diego County, a geographic region that has traditionally been very vocal in environmental activism in the United States according to interviewees. Given this resounding support for climate action within the San Diego region, interviewees report that the residents of Chula Vista have a pre-existing assumption that the city have a climate action plan as well, and that state-level support has facilitated their efforts. The City of Chula Vista has been implementing their climate action plan since 2000, with its most recent version being adopted by the City Council on September 26, 2017. The plan serves as a living document for the city, which aims to reduce community-wide GHG emissions to 15 percent below 2005 levels by 2020, and 55 percent below 2005 by 2030. It combines past city efforts to address climate change, including its Carbon Dioxide Reduction Plan (2000), the mitigation plan (2008), and the adaptation plan (2001). The Climate Change Working Group (CCWG) was composed of residents, businesses, and community representatives to help update the city's climate action plan. Most recently, stakeholders and community members urged the City of Chula Vista to adopt a community choice aggregation to meet renewable energy goals. The model allows residents and businesses to choose who will purchase energy on their behalf, therefore offering alternative choices that can serve the community with competitively priced, clean energy choices

and reinvesting revenues into the local economy. Because Chula Vista has implemented a large part of their climate action plan and has consistently updated and revised their goals, they represent a “high capacity; high implementation” case. Understanding what public participation processes are at play can give insight into how other communities can mirror the City of Chula Vista for improved climate programming outcomes.

Kansas City, MO (*High Sustainability Planning Capacity, Low Policy Implementation*). Kansas City adopted its first climate protection plan in 2008 with the goal of reducing community-wide greenhouse gas emissions by 30 percent below 2000 levels by 2020. Passed as a resolution, the plan was largely voluntary and did not provide specific strategies for implementation. Although city operations emissions were reduced by over 40 percent, many of the plan’s 55 goals were abandoned. In 2020, stakeholders within the community – including local Sierra Club and NRDC chapters – requesting the adoption of new climate goals and greater considerations for equity and resiliency in the city’s climate action planning. As a response to this demand, the City of Kansas City’s Department of Environmental Quality is enacting a new climate action plan alongside a Climate Protection Steering Committee composed of external stakeholders, activist groups, and community members appointed by the city’s Mayor. The commission has been involved in the planning process, and are responsible for understanding the community’s climate action goals, prioritizing and aligning those goals with the city’s climate action plan, and holding the city accountable for keeping goals on track for implementation. The committee holds monthly meetings virtually to receive public comment on the plan’s document draft. However, interviewees report difficulty engaging citizens outside of organized groups. Interviewees also stated that equity and justice considerations have been a high priority throughout the engagement process: the city conducted a vulnerability assessment as part of their plan, and hired climate

justice staffers to actively communicate and engage with vulnerable populations throughout the planning process to ensure they are not adversely impacted by climate action decisions. Kansas City is therefore a “high capacity, low implementation” case which is well suited for the analysis of whether community engagement and public participation has played a role in the implementation of climate policies in the city.

Ashland, OR – *Low Sustainability Planning Capacity, High Policy Implementation.* The Ashland, OR Climate and Energy Action Plan was enacted in March 7th, 2017, and aims to reduce overall community emissions by 8 percent on average every year to 2050; to attain carbon neutrality in City operations by 2030; and reduce fossil fuel consumption by 50 percent by 2030 and 100 percent by 2050. According to the interviewee, there was a strong demand from citizen-led commissions for City Council to enact the plan. Community youth played a large role in pushing Ashland’s city government to hire a staffer solely responsible for the plan’s implementation. To assist in the process, the city created the “Ashland Climate Collaborative” to promote collaboration among various commission chairs to provide city staff with research and recommendations on next steps for the plan. Throughout the planning process, the city held three public forums and sent surveys to the community to provide feedback on the plan. According to the interviewee, advocacy efforts by local environmental organizations and activists were the driving factors motivating community members to attend forums and provide their opinions to City Council. However, engagement was not strong throughout the CAP’s development and planning process and the interviewee reported little diversity in their participation. This, in part, can be attributed to the absence of a formal communications position within the city government’s staff. The interviewee also states that their website is unorganized, and the city often struggles to provide accurate information on their climate action efforts. The City of

Ashland, OR is therefore best described as a “low capacity, high implementation” case, which can provide insight into whether activism and public participation was able to bridge the gap between these two indicating factors for sustainability.

Carlisle, PA – *Low Sustainability Planning Capacity, Low Policy Implementation.* Carlisle recently adopted a climate action plan January 13, 2022 to reduce greenhouse gas emissions of 2005 levels by 26 percent by 2025 and 80 percent by 2050. The plan’s development stemmed from city council’s participation in a state-level program that connected municipalities with local universities and non-profit group ICLEI to complete a community-wide greenhouse gas inventory. Upon its completion, Carlisle’s City Council directed a Climate Action Commission to lead the development of their climate action plan for four main areas: strategy, community engagement, zoning, and projects and estimates. The commission is comprised of volunteer task force leaders within the community who are responsible for providing an implementation plan for the plan. The interviewee states that most public engagement on the climate action plan has been an internal process, however they note increased levels of public engagement since the city’s adoption of the plan and expects this trend to continue as policy measures are implemented. Despite this, the interviewee claims that current feedback on the plan is not entirely reflective of all community demographics, and states that the commission will require more active outreach to ensure that all voices are heard throughout the implementation process. The city is now transitioning from its goal-setting phase to its implementation phase, reallocating resources, as well as the commission’s authority and capacity to implement policies. Carlisle is a “low capacity, low implementation” case. As the city is now moving into the next phase in its climate action planning, Carlisle presents the opportunity to understand the city’s implementation steps, procedures, and levels of public engagement throughout their process.

Results

The study used five public participation categories to compare the case study cities: 1) perceived facilitators to participation, 2) perceived barriers to participation, 3) methods for participation, 4) where participation occurs in the policymaking process, and 5) equity considerations in participation schemes. After conducting a cross-case comparison on each category, I find that the hypotheses proposed in this study were partially supported.

	Facilitators to Participation	Barriers to Participation	Methods for Participation	Where Participation Occurs	Equity Considerations in Participation
Chula Vista, CA (high, high)	Culture and political climate of surrounding jurisdictions "Resounding" community support and expectation for climate action Municipal Ordinance	Community Demographics (socioeconomic and racial status) Balancing state ordinance with community demographic needs	Sustainability Commission Climate Change & Decarbonization Working Groups Public workshops Public forums	Demand for CAP Development of CAP (community feedback and engagement with public for policy ideas and prioritization) Youth Movement	Formed a Climate Equity Stakeholder Working Group to create Climate Equity Index
Kansas City, MO (high, low)	Very active city council that care about public input and views	Engaging public outside of organized groups Mixed level of public support for CAP Trust in Government	Climate Protection Steering Committee Community surveys, comments, feedback on CAP Steering Committee Meetings	Demand for climate action plan Climate planning process (goal and strategy prioritization) Implementation process	Hired two climate justice workers and climate justice intern to connect with vulnerable populations
Ashland, OR (low, high)	Strong push for climate action by community Active local environmental advocacy and nonprofit organizations	1. No formal communications staff / office within City Council 2. Unorganized website makes it difficult to provide accurate information to residents	Commissions: Climate Policy, Conservation & Climate Outreach, Wildfire Safety Ashland Climate Collaborative Community survey Public forums, workshops, interviews	Demand for climate action (from commission) Citizen Advisory Committee to oversee implementation process Youth Movement	Missed "middle of the bell-curve" and only "people who cared showed up" Include equity considerations in plan implementation
Carlisle, PA (low, low)	Climate action as result of participation in state-level program	Authoritative Structure from enactment to implementation Difficulty engaging public on "conceptual ideas as opposed to specific actions"	Climate Action Committee, Task Force Volunteers Community survey Public Forums Outreach at public events	Development of CAP (post-resolution approval) Implementation of CAP	Effort to engage and conduct outreach with minority communities

Table 1: Case Studies Categorized by Participation Categories for Cross-Comparison

The first hypothesis stipulated that case cities with robust environmental activism and public participation schemes experienced a higher implementation of their climate action plans. This hypothesis was not supported. Both low implementation case studies (Kansas City, MO and Carlisle, PA) were in the process of enacting and developing their climate action plans during the time period in which case interviews were conducted. Because their plans had not yet reached

their implementation phases, I was not able to indicate whether or not participation and activism impacted the rate of policy implementation. Rather, the study finds that a city's previous implementation efforts (i.e. whether the local government had implemented climate-related policies before their climate action plan) facilitated the ability for local governments to engage community in future climate action. For the observed case studies, these previous implementation efforts established a platform for the public to become more involved in climate action within their community, and made them better equipped to understand and experience the direct effects of climate policy within their jurisdictions. When future climate action efforts were enacted by the local government, the community was already educated on local climate policy to provide feedback and input on future decision-making. This finding may imply two types of relationship pathways between environmental activism and policy implementation: proactive and reactive. The former relationship pathway indicates that activism serves as a catalyst to policymaking, which is what I had hypothesized. What my findings show, however, is that activism and participation may also be a result to prior local government decision-making by providing a framework for new advocacy groups to develop and provide the city with feedback on its climate action efforts:

“I think the fact that we have a plan provides a framework for some new forms of activism to get established because now it's a real thing. There's activism to get that thing on the radar. And then there's kind of a different activism to be like, we want to be part of the implementation...So that would not have been possible without a plan. That's another example of how having the plan has spurred more activity than we would've had before.”

The second hypothesis stated that internal capacity is not the only principal driver for successful policy implementation, but that public participation also plays a key role. This hypothesis was supported. Both case study cities with higher policy implementation (Chula Vista, CA and Ashland, OR) report an extensive public participation process, providing residents

with multiple avenues to provide input, feedback, and shape the strategies for their climate action plan's implementation. They also reported a strong, underlying culture for climate action that encourages environmental activism and advocacy within their respective communities:

“There is a strong push in the background...people were very concerned and wanting to take action...people want to see more action happen on climate...”

“We’ve kind of got to the point where, now, it is assumed that we will have a climate action plan ...a lot of the residents and stakeholders in the city expect the city to have a climate action plan...”

On the other hand, the low implementation cases (Kansas City, MO and Carlisle, PA) reported that most public participation efforts are initiated within the government and via top-down mechanisms.

“To be honest, well, I think up to this point, it [public participation] has been more of an internal product. And I'll say that in pretty much every issue we engage in the community it's very tough to get input on conceptual ideas as opposed to specific actions.”

“It’s been mixed. We’ve tried to meet community where they were. We went out to several local festivals that were happening over the summer and just ask people their thoughts. And then our climate justice workers did go out and just go into communities, met with community leaders and just people they knew that were passionate in the space to talk to them as well. So, we did get their input, but a lot of those regular citizens that don’t have a stake in this, it’s been really hard to get a lot of their time.

	Facilitators to Participation	Barriers to Participation	Methods for Participation	Where Participation Occurs	Equity Considerations in Participation
Sustainability Planning Capacity	+	/	-	-	+
Policy Implementation	+	/	+	+	/

Table 2: Observations of High Sustainability Capacity Cases and High Policy Implementation Cases across Five Participation Categories

The above table depicts how the high sustainability capacity cases performed across the five participation categories versus the high policy implementation cases. The plus symbol (+) indicates that the case studies performed well in the category (ex: a plus under “methods for participation” indicates that the case studies were observed to have many avenues in which the

public could engage with the climate action planning process). The minus symbol (-) indicates that the case study performed poorly in the category, and the dash symbol (/) indicates that observations varied for both cases in that category. The table shows that cases with high past policy implementation were better able to engage the community, provided many participation avenues, and fostered participation throughout the entire process.

Discussion and Analysis

This study observed several trends among participating case studies that may provide insight into effective community engagement processes throughout local government. First, interviewees found that when they collaborated with community organizations and stakeholders throughout the development and implementation of their climate action plans, they were able to foster stronger relationships with external partners that extended beyond the climate action planning process. Interviewees report increased trust, cooperation, and open communication about the needs of organizations:

“...our relationships with a lot of these partners, we didn’t necessarily start out on the best footing. There was a change in administration here in our office and a kind of a turnover with some staffing. And then I think even with some of the stakeholders, some turnover there, some new leadership. And so, I think when we started out we were all trying to feel each other out, and it was a little bit of a bumpy road. But I think where we are today is a much better place. I think we’ve earned some trust with them, and they’ve certainly come to our aid when necessary. I’m feeling pretty good about the relationship that’s been created through this whole climate planning process.”

“We brought all of those diverse stakeholders together to educate them on our efforts and learn from their efforts...and we’ve done three rounds of climate change working groups and each of them have provided recommendations that have been approved by city council that then feed into our climate action plans...that’s been a really big driver of policy and what kinds of policy we put into our climate action plans”

Additionally, among the methods for participation, all case studies reported the creation of citizen-led and volunteer-based commissions to be involved in or lead climate action planning and implementation procedures. In all cities, these commissions served as a main liaison that

connected the city council government with community members. Additionally, they provide accountability that the enacted plans meet their emissions reductions goals.

“I have a feeling with the more active steering committee we have now, they’ll probably be actively prodding all of the implementation partners including not just city staff but the others external to the city.”

“...one of the things the climate protection steering committee would like to see is more numbers and goals put behind some of these actions, like we will hit X by this year... And then part of what the climate protection steering committee does is keep us on track. So, once we get the plan going, they’re going to be like hey, how close are we to meeting these goals? What areas are we lacking in?”

“The resolution stated explicitly counsel would convene a commission who would come back to provide a plan for implementation of that resolution. So council directed the commission to be formed.”

Interested individuals could apply to open commissioner positions, and were appointed by the city’s Mayor. These commissions were composed of individuals outside of the government’s staff, including external community residents, activists from local environmental organizations, and relevant stakeholders. The commissions across case studies were generally responsible for providing feedback, research, and policy recommendations during the development of the climate action plan. In both low planning capacity cities (Carlisle, PA and Ashland, OR), commissions were also responsible for implementation efforts. This may be due to lower in-house government staffing, as well as less financial and administrative capacity to follow-through on all measures outlined in the climate action plan. In this way, strong commissions and working groups may enable strong public participation, and increase governmental receptiveness to residential demands and feedback.

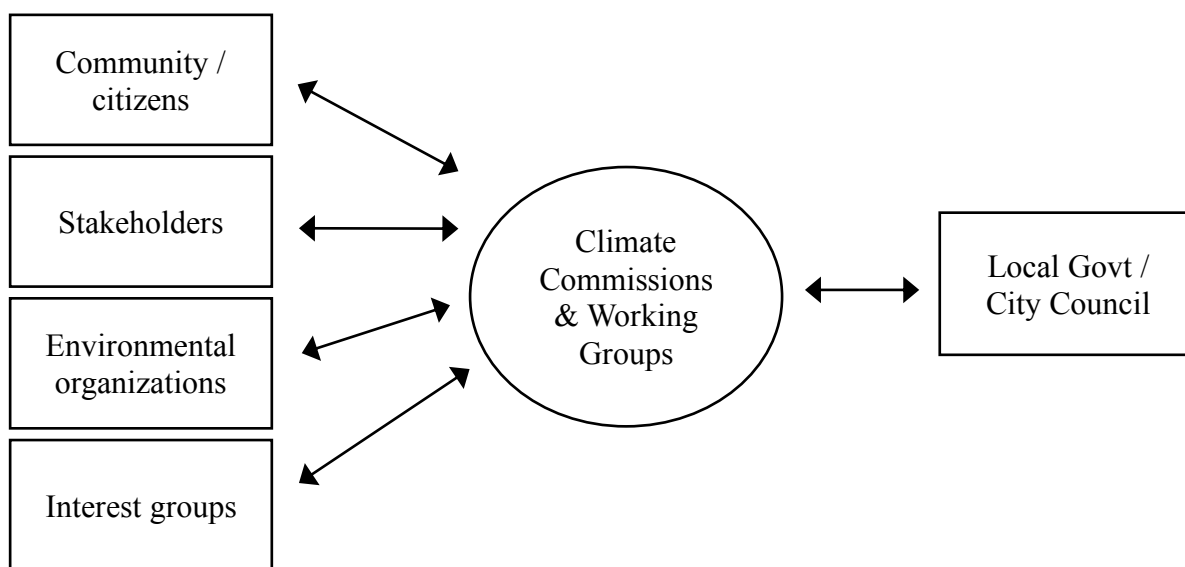


Fig. 2. Climate commissions and working groups as liaisons to connect community and local government

The role of commissions in climate action planning provides an interesting discussion on what top-down versus bottom-up systems of public participation exist, and how they each fit into the city's overall policy enactment and implementation. While I had expected there to be a greater presence of bottom-up activism throughout the policymaking process, interviewees reported traditional bottom-up grassroots advocacy playing its largest a role in the initial phases of policymaking by pushing the city to adopt climate action efforts. Most public engagement after the initial enactment phase stemmed from in-house government efforts to gauge public input, feedback, and opinions on climate action plan proposals, goals and priorities, and implementation strategies (often via commissions and working groups). This demonstrates that both top-down and bottom-up systems of activism are both important to ensure effective environmental governance and climate action. Additionally, it may be that bottom-up activism is most effective for demanding action, and top-down is most effective to ensure continued engagement throughout the entire policy process, all the way through implementation. There is

an observed shared responsibility for both residents and local government officials to create a collaborative participation process.

A particularly interesting observation explores the growing role of environmental justice and equity in climate action planning. Case cities without intentional environmental equity and justice considerations throughout their climate action planning process reported difficulty in engaging all community members, and did not have strong engagement in the planning process for their climate action plans:

“The only people who care enough about it are the only ones who show up, so you kind of miss that middle part of the bell-curve...if [city government] wasn't so intent on doing this climate work, that level of engagement would have eventually been a problem to get implementation underway...I went to those forums and there was very little diversity in that room, it was primarily older retired white people of means. There's a whole swath of [city residents] that didn't participate, didn't learn anything new in the planning process”

On the other hand, Kansas City, MO finds that their participation process has been most successful in ensuring that implemented policies do not adversely impact marginalized communities that have been harmed in the past.

“where that engagement and that dialogue is really going to be helpful is making sure that we don't adversely impact our communities that we've already been hurting over time.”

The interviewees point to climate justice workers hired by the city as an avenue to engage vulnerable populations throughout the climate action plan's goal setting and prioritization phases, and also states that the city plans to partner with marginalized neighborhoods before implementing a program in their area.

A growing body of research explores the relationship between environmental equity and public participation. Studies find that the involvement of vulnerable and marginalized concerns in planning process can support procedural equity goals (Kinzer, 2018; King et al., 1998; Arnstein, 1969). Local governments that employ more equity considerations may include more

public participation processes to engage these vulnerable demographics. As a result, public participation processes may highlight concerns of vulnerable members of the community leading to more equity being addressed in plan. The outcome of this is a feedback cycle where an inclusive participation process leads to more equity consideration in policy-making, and in turns promotes further engagement opportunities for vulnerable and marginalized populations throughout the community.

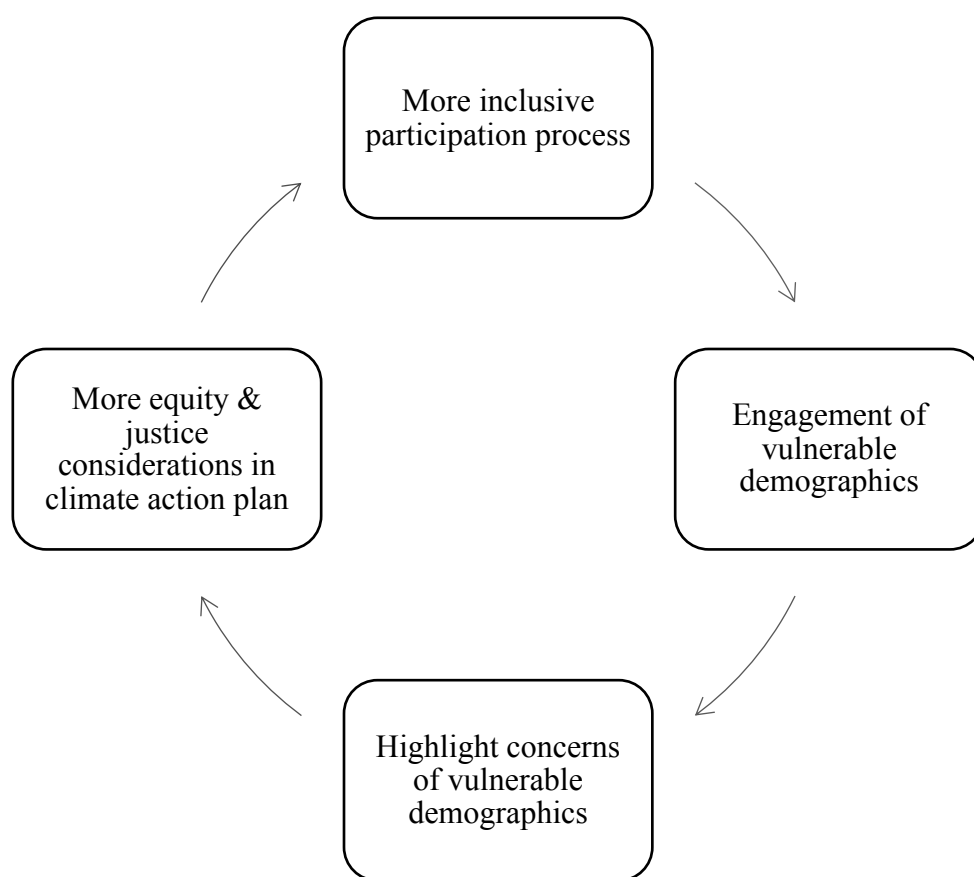


Fig. 3. Cyclical feedback loop depicting the relationship between inclusive public participation and increased environmental justice and equity considerations in climate action planning and policies.

Overall, all interviewees expressed that environmental activism and public participation impacts the actions taken and priorities of their local government:

“It is not to say that if a policy is unpopular we aren’t going to support it if it is the right thing to do, we will probably change it to get it across city council, what a city supports, and I think it makes a really big impact...it is important to persevere...when stakeholders say ‘hey this is really going to impact us,’ we modified the ordinance a little bit...this type of engagement shapes policy.”

“People stepping in front of an elected body and saying ‘this is important and we want you to look at it and we want you to do something about it’ is really effective at making sure that at least an issue does not get lost...we would not have a climate energy action plan if people hadn’t kept coming and kept saying ‘council you need to do this...and here are all the reasons why’...there is always a million things that every municipality has to deal with, and climate is not one of those things...so activism in a community is incredibly important in moving local climate work forward”

“though it wasn’t one of his big agenda items, it has become so because a lot of the activists are out there and the advocates are pounding this into council and our mayor about how important this is. And they’re making the ties to health and wellbeing and all of those things that councils need to see and the bottom line. So, they’re making that tie that this isn’t a good thing for us economically as well.”

The role that public participation has in policy implementation can be observed via four main avenues: 1) Increasing government accountability 2) Understanding community needs, 3) Providing technical assistance, and 4) Relationship and social capital building. These findings are in line with previous literature, and serve to further solidify current theories on the impact of public participation in environmental governance.

There were a few key limitations of this study due to its scope and timeline. First, it did not consider the political affiliation, population demographics (i.e. racial and ethnic distribution, wealth, age, size), or scale of the local government’s service level provision. These factors may potentially be key indicators of a city’s ability to implement climate policies, despite having a very active and engaged public or strong activism. It would be relevant to consider which of these factors prevail as the most and least important for climate action. Additionally, if given more time to conduct this study, I would have liked to interviews with local grassroots organizations and activist groups outside of the local government that were involved in climate

action activism and planning. These groups provide first-hand perspectives and experiences with their community's participation and engagement processes and its ability to respond to public demands.

Conclusions and Next Steps

Local governments across the country are taking the lead to mitigate and adapt to climate change. Despite this, many cities continue to struggle to move their enacted climate action plans into implemented programs. As communities become increasingly at-risk of extreme heat, flooding events, wildfires, other climate-related impacts, understanding what conditions facilitate and encourage climate action can better frame future decision-making. While literature has emphasized internal governmental procedures and management structure as the main drivers for a city's sustainability, less have explored the mechanisms that motivate local governments to act on climate issues, and their ability follow through on these actions. Through a cross-comparative case study of four US cities, the goal of this paper was to provide exploratory insight into whether a relationship between environmental activism and climate policy implementation exists. It finds that case cities with prior climate policy implementation are better able to create robust public participation for future climate action planning; and that engaging residents throughout the entire policymaking process (enactment, development, implementation), as well as providing multiple avenues for participation (top-down and bottom-up mechanisms) are important to increase government accountability, understand community needs, provide technical assistance, and build relationships and social capital among community members.

Given the small sampling size of this study, the findings presented cannot be generalized to the entire country. Future studies can explore the topic by conducting case studies with a larger number of local municipalities in the United States, or by expanding the scope of analysis to

state, national, or international levels. Additionally, scholars can further analyze the relationship between environmental activism and public participation in cities that have enacted their climate action plans around the same time to control for the timeline it takes to move plans from enactment to implementation.

In line with current literature on the topic, this study emphasizes the need for more formalized processes of public participation within local government systems across the country. These should encourage grassroots mobilization and activism efforts, and should balance a bottom-up and top-down approach to climate action planning. Additionally, public participation mechanisms are most effective when they are integrated at all points of the policymaking process, and with the presence of a commission to connect residents with government. Lastly, local governments are better able to create engaged communities by centering their climate efforts around equity and justice principles.

While government has a part to play in engaging community members, the public is equally as responsible in ensuring that their voices are heard. Through environmental activism and participating in local government decision-making, individuals have the power to impact their communities and ensure that their government is enacting, developing, and implementing climate strategies that align with their community needs and values. As an environmentalist, I often hear the argument that one person or one initiative won't change the climate crisis. What this research hoped to show is simple: only when all citizens are actively engaged and participatory can this country can begin building a more climate resilient future.

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