

Chapter 3

Sustainable City? The Search for Social Justice in Flagstaff, Arizona's Climate Action Plan



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Introduction

In recent decades, sustainability has emerged as an important social goal. Cities have responded by highlighting their sustainability efforts and incorporating sustainability into policy and decision-making (Long & Rice, 2019). The original conceptualization of sustainability included actions aimed at balancing economic, environmental, and social outcomes, as originally espoused in the Brundtland Commission Report (WECD, 1987). Realizing these goals simultaneously, however, has proven elusive (Whitehead, 2012). More recently, sustainability efforts at the city level increasingly focus on greenhouse gas reduction efforts, as the gravity and potential consequences of climate change become more stark (IPCC, 2018). In some cases, climate action plans in large US cities focused on emission reductions in ways that marginalized justice concerns and pitted environmental issues against equity issues (Finn & McCormick, 2011). At the same time, many plans did not prove effective at reducing emissions, prioritizing existing city actions rather than implementing new policies and actions designed to reduce emissions (Millard-Ball, 2012).

Although focused primarily on reducing carbon emissions, many climate-related planning efforts recognized the implications climate change has for residents, and the most vulnerable in particular, and have expanded their scope to include questions around justice and equity.

Early analyses exploring how climate action planning addressed justice showed that the plans invoked justice and equity but in ways that did not elevate them to the same level as environmental, and in particular, economic concerns (Saha & Paterson, 2008). Increasingly, action plans include language on justice or equity, but few have enacted specific climate actions that seek to promote just outcomes (Schrock et al.,

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2015). Many climate-related planning processes start with or include a vulnerability assessment. These analyses draw on scientific information, climate projections, and demographic trends to determine the degree to which ecological and social systems are susceptible to climate change. Although these efforts produce important information and help contextualize the likely consequences climate change poses for cities, they remain problematic in many cases. The notion of vulnerability remains contested, often ignores important social considerations, fails to identify the existing vulnerabilities that climate change will exacerbate, and should not merely focus on risk (Krellenberg et al., 2017). More importantly, legitimate assessment requires “engaging with the often historically complex and politically contentious factors that structure vulnerability more broadly, and the complex trajectories of development” (Krellenberg et al., 2017, 412).

Increasingly, sustainability efforts in cities attempt to simultaneously reduce emissions and increase equity, which poses significant challenges. As the chapters in this volume show, meeting the latter has proven difficult. Sustainability efforts have increasingly shifted focus towards climate urbanism. Long and Rice (2019) suggest that cities represent the most appropriate site for climate action and argue that climate urbanism include actions designed to protect cities, especially those elements crucial for local economies, from the negative consequences posed by climate change. It remains unclear, however, to what extent these efforts affect equity and justice. Plans invariably include detailed actions and goals around emission reductions but do not include similar metrics and objectives related to equity and justice. This chapter places emphasis on an understudied area (small cities) and also contributes to the call by Hodson and Marvin (2017) to broaden research into different urban contexts to better understand whether economic aims overshadow and marginalize other priorities as cities embark on new ways to embody what it means to be a “sustainable city.” This chapter also focuses on why climate action planning often fails to sufficiently reduce carbon emissions and at the same time inadequately addresses issues of justice and equity. In this chapter, I draw on my experience with and the preliminary outcomes of the Flagstaff Climate Action and Adaptation Plan (CAAP).

Ideological Denialism: Addressing Growth and Injustice

In common parlance, ideology is understood as someone’s worldview, often associated with their political affiliation. More specifically, ideology represents systems that enable social groups to pursue specific interests (Thompson, 1990). Although ideology remains a contested concept, and has fallen out of favor in some disciplines, the term remains relevant to climate change studies. Here, the term is used in a narrow context and draws on the conceptualization put forth in critical theory. Specifically, ideologies “conceal or mask social contradictions on behalf of a dominant class or group,” and ideology “duplicates and enforces the status quo” (Held, 1980, 107). This duplication and enforcement happens not through coercive action

but through “hegemonic ideology” (Gramsci, 1971) through cultural forces that lead to social acceptance and acquiescence. Central to conceptions of ideology is the notion of contradictions or a negative conception of ideology (Gunderson et al., 2018). A contradiction occurs when oppositional forces are present at the same time (Harvey, 2014) or when two paths cannot be realized simultaneously.

Focusing on contradictions takes on importance when analyzing climate change actions to see whether proposed actions can realize their stated goals or instead further and support the very social processes that created the problems in the first place (Stuart et al., 2020). Increasing evidence suggests that climate change responses often do not alter the systemic forces driving it and instead reproduce them. Gunderson et al. (2018) refer to this as the capital-climate contradiction, in which responses maintain and expand economic growth, a primary driver of global emissions. Effective responses instead would have to focus on putting forth actions that limit or reduce economic growth. While this position seems to run counter to what is widely considered common sense (economic growth is good), scholars increasingly agree that more growth is not good and is driving us deeper into social and ecological crises (Hickel & Kallis, 2019).

Economic growth, and specifically gross domestic product (GDP), has historically served as the barometer for societal progress and well-being (Schmelzer, 2016). It was used in World War II to measure productive output for the war effort. GDP is the market value of all goods and services produced in a given time period. Rising GDP has led to dramatic increases in material consumption—Parrique et al. (2019) show that per capita resource use globally has doubled in the last 100 years. GDP increase of 1% leads to a 0.6% increase in material use (Wiedmann et al., 2015) and 0.5–0.7% increase in carbon emissions (Burke et al., 2015). This production requires increasing levels of materials and energy and has also resulted in extreme inequality with the wealthiest 1% accumulating 82% of global wealth in 2017 (Oxfam International, 2018). Recent analyses also show that GDP represents a poor indicator of well-being, and economists have increasingly called for different measures (Victor, 2010; Stiglitz, 2019), such as the General Progress Indicator. Additionally, economic growth above levels that meet basic needs does not increase well-being or happiness (Easterlin et al., 2010) and can undermine social and environmental prosperity (Stiglitz, 2019). As GDP has risen in recent decades, 43 million people remain in poverty, and wages remain stagnant (Semuels, 2016). Hickel (forthcoming) argues that, despite tremendous economic growth, Americans had higher wages and standard of living in 1975 compared to the present. Instead of GDP increasing well-being, continued growth has created inequities and vulnerabilities. Increasing evidence indicates we cannot increase GDP and stay within the targets of the Paris Climate Agreement (Hickel & Kallis, 2019; Parrique et al., 2019). In other words, further increasing GDP does not result in social benefits and increases carbon emissions. Climate action planning that fails to address these realities has little chance to meet ambitious equity and emissions goals. Furthermore, too often planners overlook cities as sites of accumulation. Harvey (1973, 1982, 1985, 1989) has written extensively on this point, while Smith and Floyd (2013) have outlined that cities create an urban growth machine. These insights show how

global economic forces and capital accumulation intertwine with urban planning at the local level to affect city planning, resource allocation, rules, participation, and ultimately unjust outcomes.

Multiple factors help explain why governments and society have taken minimal actions to address climate change. The efforts by outright climate denialists, those who argue climate change does not exist and is not caused by humans, have been influential and far-reaching. Denialism has a decades-long track record of relying on scientists, fossil fuel front groups, and well-positioned political insiders that created propaganda campaigns to intentionally mislead the public and thwart action (Oreskes & Conway, 2010). In addition, and counterintuitively, supporters of taking immediate action on climate change have also unwittingly hampered effective action as the examples below outline. Although not as far-reaching as outright denial, ideological denialism has important implications for understanding the inability of society to dramatically reduce emissions. Ideological denialism occurs when climate change is acknowledged as happening and in need of a response but leads to solutions that do not address the actual drivers of emissions (Petersen et al., 2019). This then represents an involuntary denial based on societal ideological preconceptions that mask contradictions.

Examples continue to proliferate that showcase ideological denialism. Perfunctory climate change strategies dominate action plans. Two obvious examples, renewable energy and electric cars, have broad support but conceal contradictions that limit their effectiveness. Support for expanding renewable energy to address carbon emissions rests on the assumption that producing energy through wind and solar technology displaces fossil fuel-based energy production. Limited evidence supports such an outcome. Cross-national analysis has shown renewables only marginally displace fossil fuels (York, 2012) and prove more effective in low-income countries compared to high-income countries where economic growth and carbon emissions are coupled (Thombs, 2017; Jorgenson & Clark, 2012). Recent analyses show that even as renewable energy production increased, so did traditional energy production, empirically showing that renewables do not always replace but often add to overall energy production (York & Bell, 2019). Similarly, electric cars have broad support based on the notion that their use will replace fossil fuel. Due to their recent adoption, empirical evidence supporting this claim remains elusive. However, projections related to electric car production and use in the coming decades warrant examination. To transfer to a low-carbon economy, Sovacool et al. (2020) suggest that electric car production needs to increase from 1.2 million to 965 million cars by 2050. The energy, materials, and transportation required for such production has immense ecological and social implications, not to mention total energy use. In addition, a shift to electric vehicles does nothing to alter the car-based society currently in place and may even exacerbate it.

These examples highlight ideological denialism. Rather than focusing on solutions that fundamentally alter our growth-based society, these examples represent growth-based actions. Building alternative energy and electric vehicles takes place in a growth-based economy predicated on profits. These interventions, “solutions”

that seek to reduce emissions but do so in a growth-based way, mask the capital-climate contradiction inherent in climate action (Stuart et al., 2020).

Overwhelming evidence shows that vulnerable populations face the greatest risks from climate change. This holds for global inequities (Roberts & Parks, 2006), as well as those within the United States (U.S. Global Change Research Program, 2018). Natural disasters, especially hurricanes in recent years, disproportionately affect marginalized communities due to power relations and priorities that insufficiently focus on the most vulnerable (Sovacool, 2017). Decades of racism and discrimination have led to minorities and the poor in the United States bearing the brunt of pollution (Bullard, 1990) and to power relations that divert polluting industries towards minority communities (U.S. Commission on Civil Rights, 2003). This history has significantly influenced national efforts to effectively respond to climate change. The Green New Deal (2019) gives significant attention to equity and justice, focusing specific attention on “systemic injustices” that “frontline and vulnerable communities” face. It also calls for securing basic necessities like clean air and water, as well as creating jobs to support families. It is also increasingly argued that to successfully push forward climate policy, we will need to bridge coalitions across climate- and justice-oriented groups and constituencies (Cassagard et al., 2017).

Similar to broad responses to climate change, actions to address equity and justice fall prey to ideological denialism. Ideologies focused on growth often invoke equity but ultimately proffer actions that undermine it. Similar to climate change responses, such approaches identify equity and injustice as important and in need of response but then put forth approaches that do not lead to just and equitable outcomes. Alternative energy represents actions that only governments and affluent individuals can pursue. Although alternative energy has the potential to yield broad, societal benefits (Gunderson et al., 2018), it often does not due to equity issues. The poor and marginalized cannot access these technologies, and deploying renewables is not widely aimed at overcoming past discrimination or meeting the needs of the marginalized first and foremost. Similarly, electric vehicles cater to the affluent, many of whom already own functional automobiles (Hirsch, 2014). Perhaps more importantly, a car-centered ideology has historically led planners to privilege affluent car owners and thus indirectly discriminate against the poor and marginalized with few transportation choices (Soja, 2010).

These outcomes do not signify avarice or prejudice among planners: “maintaining these automobile-driven discriminatory practices does not require evil people intentionally making racially biased decisions, just well-trained experts following conventional procedures to make decisions and plans that will almost always favor the wealthier and more powerful segments of urban society” (Soja, 2010, xvi). This insight has direct relevance to contemporary climate action planning. Well-intentioned people, including city council members and transportation planners, continue to put in place policies and actions that extend injustices based on ideologies that mask contradictions and privilege some groups in society over others. Doing so not only leads to or extends injustices, but poses significant challenges for cities striving for sustainability and deep emission reductions.

Climate Action Planning in Flagstaff, Arizona

The City of Flagstaff is a politically progressive mountain town in northern Arizona with a population of over 70,000. The city's proximity to Grand Canyon National Park draws tourists from around the world, and tourism remains an important part of the city and regional economy. A state university, the regional hospital, headquarters for several federal land management agencies, Gore Industries, and a Purina pet food facility represent the primary employers. The 2012 Flagstaff Regional Plan estimates that population in the city will top 106,000 by 2050.

Flagstaff has a progressive reputation, particularly in the context of residing in a historically conservative state. The City Council established the Sustainability Commission in 2008 to advise council members on sustainability-related matters. In 2017, the City Council listed both "Advance social justice in our community" and "Take meaningful action on climate change" as council goals. To work towards the latter, the council directed the Sustainability Section to create a steering committee to advance this work. They also allocated funds and ultimately hired Cascadia Consulting Group to write a climate action and adaptation plan, which involved initially writing a vulnerability assessment and included climate projections for the region. The 16-person steering committee included city staff, academics, and business, nongovernmental, and community representatives. City staff organized and held public forums, which steering committee members helped facilitate, as well as other outreach activities aimed at informing the public and including their comments in the plan. In November 2018, the City Council unanimously adopted the Climate Action and Adaptation Plan, which calls for reducing greenhouse gas emissions by 80% by 2050 and puts in place a road map to do so.

The CAAP outlines recent and projected regional outcomes related to climate change. Data show that annual average temperatures have steadily and dramatically increased in the past 30 years. The plan indicates that the region can expect hotter temperatures, less snowpack, drier conditions, and adverse effects for forests. These trends portend increased vulnerability for "Flagstaff's resources, systems and populations" (CAAP, 2018, 17), including wildfire, drought, flooding, and increased temperatures. The plan outlines community emissions and uses 2016 as a baseline when emissions reached 787,315 metric tons of carbon dioxide equivalents. Transportation represents the largest contributor (~41%), with commercial (20%) and residential (17%) energy as the other primary emission contributors. The plan makes note that the emission inventory does not adequately assess those emissions related to trade or assess consumption-based emissions. The plan also projects that the population in the region will grow 35% by 2050, residential energy demand will increase by 60% by 2030, commercial electricity demand will grow by 50% by 2030, and vehicle miles traveled will increase by 50% by 2030. Lastly, without climate action, the plan projects that emissions will increase by 34% by 2050.

Ideological Denialism and Climate Action

The CAAP has the potential to ameliorate consequences posed by climate change and has raised climate action as an important and identifiable goal for the city. The plan also provides a useful primer on climate change and action. However, the language used throughout and the process that preceded the final plan's adoption conceal contradictions that have significant consequences for both emission reductions and equity outcomes.

The plan has broad language around the linkage between the economy and climate action and emissions. It notes the need to maintain economic vitality, by supporting tourism and aiding businesses in capitalizing on climate change to create high-quality jobs aimed at facilitating climate change solutions. Although well intentioned, these priorities represent ideological assumptions held by climate change advocates not identified explicitly in the CAAP. The CAAP, for example, seeks to support tourism, as well as outline how climate changes may affect local tourism. Tourism represents a crucially important element in the regional economy but also has emission implications. Globally, tourism accounts for over 8% of global carbon emissions (Lenzen et al., 2018) and continues to rise. Promoting tourism helps the local economy but hampers emission reduction efforts. The quest for high-quality jobs has obvious benefits, including economic security for individuals, as well as tax revenue for the city government. Economic growth, facilitated in part by expanding tourism, however, represents the primary driver of global emissions (Schnaiberg, 1980). The CAAP implicitly supports so-called green growth, which includes creating "green jobs" that purportedly enable the economy to grow while simultaneously reducing emissions. To date, no empirical evidence supports such an outcome. Instead, evidence continually shows a strong coupling between economic growth and emissions (Hickel & Kallis, 2019). Steering committee meetings preceding the CAAP spent considerable time on the need to support and grow the economy. Discussions regarding decoupling and the emission implications of a growth-based plan prompted one member to suggest "unless we want to overthrow capitalism we have to pursue growth." This quote provides an example where ideology played an important part in steering the direction of the plan, forestalling conversation around climate actions that would have helped to dramatically reduce emissions but were not even invoked. Ideological denialism creates assumptions and fails to bring to light the contradictions between pursuing economic growth and emission reductions simultaneously.

A similar contradiction emerged in crafting specific actions to include in the CAAP. The plan has seven foci, including natural environment, water resources, energy, transportation and land use, waste and consumption, public health, and economic prosperity and recreation. Here I focus on energy and transportation to highlight how assumptions and ideology affect climate planning and outcomes. Significant time and attention went towards discussing the role technology, especially renewable energy and electric cars, would play in the actions prioritized in the plan. The energy section prioritizes energy efficiency, expanding renewable energy

production and use, and managing energy demand, which focuses heavily on technological change. Implementing these strategies would undoubtedly have benefits, including over time decreased electricity costs for consumers. However, the support for such approaches has a basis in false assumptions that conceal contradictions. Significant evidence suggests that increased efficiency leads to increasing use. Referred to as Jevons Paradox and the rebound effect, efficiency gains often go back into production and activities that increase overall resource use and associated energy use (Polimini et al., 2008; Sorrell, 2009). National assessments show that alternative energy does not displace fossil fuel-based energy one to one (York, 2012) and that shifts to alternative energy increase total energy production with little reduction from fossil fuel energy generation (York & McGee, 2017). As a result, efficiency and renewable energy actions show a clear contradiction in which climate actions do not offset emissions to the degree assumed and in some cases increase emissions. Effectively using renewable energy in the CAAP would require an assessment to see whether the approach taken would actually lead to emission reductions. A failure to start with a conversation in that context highlights the role ideological denialism can play in climate action planning.

The approach taken in the CAAP regarding equity also conceals contradictions. Steering committee discussions weighed different options on how to engage equity in the plan. Arguments to make equity a specific goal were met with resistance. In an exchange about the idea to prioritize justice and equity in the plan, one member stated “This is a climate change plan. Justice is something different.” Another member noted that the city already has a department working on equity and that the steering committee needed to focus on climate. This framing and these perspectives reflect the assumptions and ideological predispositions of some of those who support both climate action and justice but who see them as distinct and separate. Such a formulation has important implications for the way in which equity is invoked and acted on in climate action planning.

The ultimate equity impacts climate action planning has on cities depend on multiple factors, including education and planning. In discussions regarding the CAAP, the historic role that redlining has played came up. The majority of the steering committee included highly educated professionals that declared support for addressing both equity and emissions. At one point, someone asked the group to raise their hands if they understood redlining—a systematic denial of mortgages and credit to people of color in cities throughout the United States—and only a couple of people raised their hands. This highlights how the historical reasons for inequity in Flagstaff remain obscure or unknown. Rather than focusing on specific drivers of injustice in the region, the CAAP discussion centered on broad generalities about the types of people marginalized and the broad factors for that outcome. The CAAP identifies equity as a goal, but does not identify the forces and power relations that create injustice. Instead, the CAAP has an “equity checklist” modeled after the City of Portland’s Climate Action Plan. The checklist intends to infuse equity throughout the document, as opposed to making it an explicit, stand-alone goal on par with the plan’s other foci. The plan does not outline how equity will be

assessed nor identify specific actions to ensure that equity is acted on. It remains to be seen how equity can be achieved without assessment protocols in place.

In addition to not operationalizing equity assessment, the CAAP also uses an approach for emission analysis that leads to injustices. The CAAP analysis uses a sector approach. By creating categories of emissions (e.g., energy, transportation), the process lumps uses together. As Rice (2014, 386) has noted, "carbon reduction campaigns are targeted at the city writ large rather than at the populations or areas with the largest emission footprints." In the context of transportation, for example, this approach fails to differentiate where those emissions emerge from and who or what drives them. In addition, this coarse accounting fails to identify the most important actions that would reduce emissions and overcome historic injustices in the way cities are planned and organized (Soja, 2010). Well-meaning planning and perhaps even climate action may create or exacerbate injustices. The CAAP has no formal mechanism to identify such outcomes, and the steering committee process did not address this potentiality. As a result, contradictions remain in the plan and in city decision-making more broadly, leading to ambiguous emission and equity outcomes.

A local tax initiative provides an illustrative example highlighting how assumptions and contradictions infuse city planning, with consequences for emissions and equity. While the city council supported the CAAP process, it also considered three transportation propositions that would provide 20 years of funds to address transportation projects. The money would support an array of projects that included public transportation and bike infrastructure but overwhelmingly funded bridges and new roads. During city council meetings, it emerged that city staff orchestrating and planning the propositions and associated taxes had not seriously considered the climate consequences despite the council identifying climate action as a priority. The council ended up supporting the propositions, placing them on the ballot, and voters approved two of the three propositions. Beyond the confines of the CAAP, this outcome speaks to city priorities but also to ideological assumptions. Implementing the projects supported by the tax, which include bike infrastructure across town but primarily provide funds for new roads and a downtown overpass across train tracks, continues a transportation focus on single-occupancy vehicles and drivers. This creates injustices for those not well served by a transportation system focused heavily on cars (Soja, 2010). Additionally, opponents of the propositions argued that the projects supported by the tax would increase vehicle miles and congestion and come at the expense of spending those dollars in ways specifically designed to overcome past injustices in the transportation sector and reduce emissions. This discussion showcases how ideologies lead to creating and implementing strategies that undermine equity and emission reductions. It also highlights how ideological orientations around growth and expansion continue to shape local decisions-making, even when a CAAP effort is underway, with clear consequences for climate action.

Taken together, these factors highlight how ideological denialism can influence climate action. The City Council and CAAP steering committee members vocally supported equity; however, invoking and openly supporting equity does not inherently lead to outcomes. Climate action planning, and associated policy, has

professed support for addressing equity but has failed to identify the drivers of injustice and has thus precluded crafting and implementing a climate plan designed to overcome them. This example shows how ideological denialism influences climate action planning intended to promote equity and justice.

Implications and Recommendations for Climate Action Planning

The Flagstaff example of climate action planning provides insights into the challenges cities face in their attempts to reign in emissions and promote equity. This analysis, while critical in nature, is not meant as a criticism of those involved with climate action in Flagstaff. Without question, those working on climate action, especially city staff shepherding this process, remain committed to effective action and to equitable outcomes. This analysis merely points to some reasons why reaching the ambitious goals embedded within the CAAP might prove challenging to achieve—as pro-growth ideologies remain dominant. Based on this analysis, and in the spirit of making the CAAP activities as robust and consequential as possible, while also providing insights that climate action planning efforts elsewhere might find useful, the following recommendations could serve as a guide to making climate action more effective and equitable:

1. *Survey and document the factors leading to vulnerability and injustice*

The CAAP process identified equity as a goal, and the final document engages equity in various ways. However, the CAAP did not lead to specific language or proposed actions that add up to the task of realizing just outcomes. In particular, the historical and more contemporary factors that create unjust outcomes did not receive sufficient attention and interrogation. To overcome this shortcoming, climate action planning needs to outline and detail the reasons that explain societal injustices. Vulnerability assessments, while providing important insights into the risks climate change poses to cities, do not adequately *explain* why some populations experience and remain vulnerable to climatic perturbations. This requires a historical analysis pinpointing specific policies, ideologies, power relations, and legal mechanisms that have created and perpetuated injustice. Vulnerability analyses, while drawing primarily on biophysical processes, can be used in conjunction with this analysis to more adequately identify existing and likely risks posed to society and particular communities. From that starting point, climate action and specific interventions can be placed in a historical context, providing a more robust means by which to weigh whether specific climate actions will promote more equitable outcomes.

2. *Undertake a more nuanced, historical emissions accounting process*

As currently construed, emission analyses do not have sufficient nuance to support climate action that can dramatically reduce emissions and lead to equi-

table outcomes. Emission tracking typically uses a sector analysis, aggregating similar sources into broad categories (e.g., transportation). This cataloguing, if used too broadly, fails to identify the variation or the key drivers within those sectors. In addition, these analyses do not interrogate why certain sectors have such large carbon footprints. In Flagstaff, transportation accounts for roughly 41% of total emissions. Obvious reasons come to mind in explaining this outcome—we have a car-based society that has historically privileged automobiles over public transportation, for example. But such a rationale fails to uncover the more specific, and in some cases local, reasons for this outcome. In Flagstaff, like in many other cities, planning and public policy have disenfranchised minority and low-income populations by focusing attention primarily on white, affluent car owners. Far from a historical legacy, transportation policy to the present continues to do so while making gestures to serving broader needs. A richer, historical evaluation would make these processes and decisions visible and help to place contemporary outcomes in a historical context.

3. *Begin the climate action planning process with a detailed needs assessment*

The undeniability of climate change consequences globally has led to basic assumptions about responding to those changes. Changes will result in fire, floods, heat waves, disease spread, and so on. Climate action plans, including the CAAP, often include responses used generally across different cities despite the local variation and context. Forest thinning, updated stormwater systems, minimizing air-conditioning, and related actions will undoubtedly be necessary and prove effective. However, this approach overlooks local situations and contexts. The argument made here is to invert the typical climate action planning process that uses generalities to assess vulnerability and associated actions and to instead start with the lived experience of residents—what do they need, how are they vulnerable, how might climate action simultaneously address injustice and emissions?

Rather than start with a vulnerability analysis and then identify actions to meet those vulnerabilities, the reverse should occur. Climate action is predicated on the false assumption that identifying vulnerability will enable cities to meet needs. Instead, cities should start with a needs assessment, independent of climate change. Initiating a needs assessment to reach out and talk with people in the community, especially those marginalized by historic prejudices and planning efforts, and asking what they need promotes action planning with equity at the forefront. Based on the needs identified, climate actions can then be positioned in a way to address emission reductions *simultaneously* with equity concerns. Taking transportation as an example, identifying the actual needs of people across Flagstaff would enable planning and climate actions to more directly address the consequence those actions will have on access and emissions. In contrast, recent planning efforts maintain that more public transportation is better without a clear articulation of what people need or whether the proposed actions and policies serve to meet those needs.

4. *Outline and detail contradictions embedded in the climate action planning process*

Building on the above recommendations, in many cases climate action plans, and the specific interventions embedded within them, fail to identify their contradictions. As noted above, alternative energy, electric cars, and transportation policy that privileges and extends a car-centric planning focus serve in some cases to not only inhibit carbon emissions reductions but also extend and perpetuate injustices. Proposing electric vehicles as a climate change solution should include a robust analysis as to how doing so will affect local people as well as global emissions. It should also include an analysis and language outlining the consequences of implementing such a policy on poor and marginalized communities. A car-based city has emission and equity consequences regardless of how most cars are powered.

5. *Implement specific, robust measures and benchmarks to meet equity goals*

Based on this analysis, and the conclusions presented in chapters throughout this volume, equity remains secondary to concerns of carbon emissions in many climate action plans. One reason, no doubt of many, for this outcome has to do with the way in which equity is invoked and acted on. Carbon emissions in every plan have clear data, benchmarks, specific goals, and language centered on realizing a particular outcome. Equity concerns do not. To overcome this discrepancy, climate action plans would have to take a similar approach with equity. Doing so means including elements from the recommendations listed above but more specifically cataloguing inequity in a similar way to emissions. This would include gathering specific data on inequity and trends over time, as well as putting forth specific benchmarks to reach with goals along the way, and specifying the end goal the plan seeks to meet. Without such a framework, equity and justice will remain secondary, if not forgotten, in climate action planning efforts.

Those involved in climate action planning no doubt have good intentions. And in many cases climate action has had positive consequences. Many climate advocates, however, have ideological presuppositions that influence action plans in a way that undermines their effectiveness. The focus on growth, technology, and broad vulnerability in Flagstaff led to a plan that promotes actions that potentially limit emission reductions and insufficiently address injustice. It remains difficult to overcome historic injustices without a full accounting of the factors and forces that created them in the first place. The CAAP does not do this. It starts with the broad notion that some people remain more vulnerable than others, but does not follow through with meaningful plans. Equity figures prominently in the CAAP, but not in the same way or with the same vigor as emission reductions. The latter are addressed through specific targets, accounting, goals, and actions; the former is not. As a result, even those who view climate change as a problem that cities should address often have perspectives and support actions that reproduce the very processes that created emissions and injustices in the first place. Ideological denialism helps to explain this phenomenon, and more attention to ideology and contradictions is needed if Flagstaff is to truly become more sustainable and climate action planning is to reign in both emissions and injustice.

6. *Acknowledge the link between economic growth, carbon emissions, and injustice*

As this case study shows, Flagstaff, and likely many other cities, move forward with climate action with an assumption that economic growth has to continue. This assumption, and the planning outcomes based upon it, makes reducing emissions unlikely at best. Similarly, the economic growth paradigm maintains and expands vulnerability. As a result, cities and planners need to acknowledge the linkages between economic growth and emissions and vulnerability. Doing so will enable climate action planning to outline and identify the barriers to emission reductions, while also making city decisions more transparent in a way that showcases how priorities of growth will stall or eliminate efforts to reduce emissions. In short, economic growth and emission and justice goals remain incompatible. Climate action plans have to make this clear. Doing so affords an opportunity to broaden climate action discussions that have historically narrowly focused on emission reductions to focus directly on ways to not only address emissions but to more importantly establish a framework upon which to realize well-being. Degrowth, an alternative to the growth paradigm that contracts the size of the economy in order to reduce emissions and maintain society within ecological limits (Stuart et al., 2021), offers an approach that cities can engage to situate their climate action work, as well as a way to focus their efforts more broadly to meet the simultaneous goals of social justice and emission reductions.

References

- Bullard, R. D. (1990). *Dumping in Dixie: Race, class, and environmental quality*. Taylor and Francis.
- Burke, P. J., Shahiduzzaman, M., & Stern, D. I. (2015). Carbon dioxide emissions in the short run: The rate and sources of economic growth matter. *Global Environmental Change-Human and Policy Dimensions*, 33, 109–121.
- Cassagard, C., Soneryd, L., Thorn, H., & Wettergren, A. (Eds.). (2017). *Climate action in a globalizing world: Comparative perspectives on environmental movements in the global north*. Routledge.
- Climate Action and Adaptation Plan. (2018). *City of Flagstaff, AZ*. Climate Action and Adaptation Plan. Retrieved from <https://gis.flagstaffaz.gov/portal/apps/sites/#/climateplan>
- Easterlin, R. A., Mcvey, L. A., Switek, M., Sawangfa, O., & Zweig, J. S. (2010). The happiness-income paradox revisited. *Proceedings of the National Academy of Sciences of the United States of America*, 107(52), 22463–22468.
- Finn, D., & McCormick, L. (2011). Urban climate change plans: How holistic? *Local Environment*, 16(4), 397–416.
- Gramsci, A. (1971). *Selections from the prison notebooks*. International.
- Green New Deal. (2019). *Recognizing the duty of the Federal Government to create a Green New Deal*. Unites States 116th Congress, First Session.
- Gunderson, R., Stuart, D., & Petersen, B. (2018). Ideological obstacles to effective climate policy: The greening of markets, technology, and growth. *Capital and Class*, 42(1), 133–160. <https://doi.org/10.1177/0309816817692127>
- Gunderson, R., Stuart, D., Petersen, B., & Yun, S. J. (2018). Social conditions to better realize the environmental gains of alternative energy: Degrowth and collective ownership. *Futures*, 99, 36–44.

- Harvey, D. (1973). *Social justice and the city*. Johns Hopkins University Press.
- Harvey, D. (1982). *The limits to capital*. Basil Blackwell.
- Harvey, D. (1985). *The urbanization of capital: Studies in the history and theory of capitalist urbanization*. John Hopkins University Press.
- Harvey, D. (1989). From managerialism to entrepreneurialism—The transformation in urban governance in late capitalism. *Geografiska Annaler Series B-Human Geography*, 71(1), 3–17.
- Harvey, D. (2014). *Seventeen contradictions and the end of capitalism*. Oxford University Press.
- Held, D. (1980). *Introduction to critical theory: Horkheimer to Habermas*. University of California Press.
- Hickel, J. (Forthcoming). *Less is more: How degrowth will save the world*. Penguin Random House.
- Hickel, J., & Kallis, G. (2019). Is green growth possible? *New Political Economy*. <https://doi.org/10.1080/13563467.2019.1598964>
- Hirsch, J. (2014, February 10). Who buys Teslas? Prius owners and drivers of exotic cars. *Los Angeles Times*. Retrieved July 11, 2020, from <https://www.latimes.com/business/autos/la-fi-hy-who-buys-tesla-model-s-20140210-story.html>
- Hodson, M., & Marvin, S. (2017). Intensifying or transforming sustainable cities? Fragmented logics of urban environmentalism. *Local Environment*, 22, 8–22. <https://doi.org/10.1080/13549839.2017.1306498>. <Go to ISI>://WOS:000418479500002.
- IPCC. (2018). In V. Masson-Delmotte, P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P. R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, & T. Waterfield (Eds.), *Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. IPCC.
- Jorgenson, A. K., & Clark, B. (2012). Are the economy and the environment decoupling? A comparative international study, 1960–2005. *American Journal of Sociology*, 118(1), 1–44.
- Krellenberg, K., Welz, J., Link, F., & Barth, K. (2017). Urban vulnerability and the contribution of socio-environmental fragmentation: Theoretical and methodological pathways. *Progress in Human Geography*, 41(4), 408–431.
- Lenzen, M., Sun, Y. Y., Faturay, F., Ting, Y. P., Geschke, A., & Malik, A. (2018). The carbon footprint of global tourism. *Nature Climate Change*, 8(6), 522–528. <https://doi.org/10.1038/s41558-018-0192-z>. <Go to ISI>://WOS:000433904400029.
- Long, J., & Rice, J. L. (2019). From sustainable urbanism to climate urbanism. *Urban Studies*, 56(5), 992–1008.
- Millard-Ball, A. (2012). Do city climate plans reduce emissions? *Journal of Urban Economics*, 71(3), 289–311.
- Oreskes, N., & Conway, E. M. (2010). *Merchants of doubt*. Bloomsbury Press.
- Oxfam International. (2018). *Richest 1 percent bagged 82 percent of wealth created last year—Poorest half of humanity got nothing*. Retrieved July 6, from <https://www.oxfam.org/en/press-releases/richest-1-percent-bagged-82-percent-wealth-created-last-year-poorest-half-humanity>
- Parrique, T., Barth, J., Briens, F., Kerschner, C., Karaus-Polk, A., Kuokkanen, A., & Spangenberg, J. H. (2019). *Decoupling debunked: Evidence and arguments against green growth as a sole strategy for sustainability*. European Environmental Bureau. Retrieved from <https://eeb.org/library/decoupling-debunked/>
- Petersen, B., Stuart, D., & Gunderson, R. (2019). Reconceptualizing climate change denial: Ideological denialism misdiagnoses climate change and limits effective action. *Human Ecology Review*, 25(2), 117–141.
- Polimini, J. M., Myumi, K., Giampietro, M., & Alcott, B. (2008). *The Jevons paradox and the myth of resource efficiency improvements*. Earthscan.
- Rice, J. (2014). An urban political ecology of climate governance. *Geography Compass*, 8(6), 381–394.
- Roberts, J. T., & Parks, B. (2006). *A climate of injustice: Global inequality, north-south politics, and climate policy*. MIT Press.

- Saha, D., & Paterson, R. G. (2008). Local government efforts to promote the “Three Es” of sustainable development—Survey in medium to large cities in the United States. *Journal of Planning Education and Research*, 28(1), 21–37.
- Schmelzer, M. (2016). *The hegemony of growth: The making and remaking of the economic growth paradigm and the OECD, 1948–2010*. Cambridge University Press.
- Schnaiberg, A. (1980). *The environment: From surplus to scarcity*. Oxford University Press.
- Schrock, G., Bassett, E. M., & Green, J. (2015). Pursuing equity and justice in a changing climate: Assessing equity in local climate and sustainability plans in US cities. *Journal of Planning Education and Research*, 35(3), 282–295.
- Samuels, A. (2016, November 4). Does the economy really need to keep growing quite so much? *The Atlantic*.
- Smith, J. W., & Floyd, M. F. (2013). The urban growth machine, central place theory and access to open space. *City, Culture and Society*, 4, 87–98.
- Soja, E. W. (2010). *Seeking spatial justice*. University of Minneapolis Press.
- Sorrell, S. (2009). Jevons' paradox revisited: The evidence for backfire from improved energy efficiency. *Energy Policy*, 37(4), 1456–1469.
- Sovacool, B. K. (2017). Don't let disaster recovery perpetuate injustice. *Nature*, 549(7673), 433.
- Sovacool, B. K., Ali, S. H., Bazilian, M., Radley, B., Nemery, B., Okatz, J., & Mulvaney, D. (2020). Sustainable minerals and metals for a low-carbon future. *Science*, 367(6473), 30–33. <https://doi.org/10.1126/science.aaz6003>
- Stiglitz, J. (2019, November 24). It's time to retire metrics like GDP. They don't measure everything that matters. *The Guardian*. Retrieved from <https://www.theguardian.com/commentisfree/2019/nov/24/metrics-gdp-economic-performance-social-progress>
- Stuart, D., Gunderson, R., & Petersen, B. (2020). *Climate change solutions: Overcoming the capital-climate contradiction*. University of Michigan Press.
- Stuart, D., Gunderson, R., & Petersen, B. (2021). *The degrowth alternative: A path to address our environmental crisis?* Routledge.
- Thombs, R. P. (2017). The paradoxical relationship between renewable energy and economic growth: A cross-National Panel Study, 1990–2013. *Journal of World-Systems Research*, 23(2), 540–564.
- Thompson, J. B. (1990). *Ideology and modern culture*. Polity Press.
- U.S. Commission on Civil Rights. (2003). *Not in my backyard: Executive order 12,898 and title VI as tools for achieving environmental justice*. U.S. Commission on Civil Rights. Retrieved from <https://www.usccr.gov/pubs/envjust/ej0104.pdf>
- U.S. Global Change Research Program. (2018). *Fourth National Climate Assessment*. U.S. Global Change Research Program.
- Victor, P. A. (2010). Questioning economic growth. *Nature*, 468(7322), 370–371.
- Whitehead, M. (2012). The sustainable city: An obituary? On the future form and prospect of sustainable urbanism. In J. Flint & M. Raco (Eds.), *Sustaining success: The new politics of sustainable urban planning* (pp. 29–46). Polity Press.
- Wiedmann, T. O., Schandl, H., Lenzen, M., Moran, D., Suh, S., West, J., & Kanemoto, K. (2015). The material footprint of nations. *Proceedings of the National Academy of Sciences of the United States of America*, 112(20), 6271–6276.
- World Commission on Environment and Development. (1987). *Our common future*. Oxford University Press.
- York, R. (2012). Do alternative energy sources displace fossil fuels? *Nature Climate Change*, 2(6), 441–443.
- York, R., & Bell, S. E. (2019). Energy transitions or additions? Why a transition from fossil fuels requires more than the growth of renewable energy. *Energy Research & Social Science*, 51, 40–43.
- York, R., & McGee, J. A. (2017). Does renewable energy development decouple economic growth from CO₂ emissions? *Socius: Sociological Research for a Dynamic World*, 3, 1–6.