

Introduction & Background

Climate change has become a widespread issue, affecting communities across the globe. As humans navigate the effects of climate change, the impacts will be increasingly felt by urban communities. Their role within the climate policy sphere is becoming increasingly vital. This project will examine the public discourse surrounding the creation and implementation of climate change policy at the municipal level therefore addressing sustainability issues. It will answer the following research question: Who are the important actors involved with climate change policy in Long Beach, and what are their perspectives and approaches to tackle climate related issues facing the city?

Recent literature provides insights to connect relevant research concepts to realized implementation.

The United States Environmental Protection Agency (EPA) (2015) has distributed resources informing the public of the numerous effects on human health and wellbeing that may occur during the shifting of natural processes tied to climate change. The EPA is focused on the prevention of drastic changes to the climate by introducing strategies to manage environmental aspects such as air quality, water, waste management, and extreme weather events.

Wang (2013) posits that cities play a uniquely important complementary role to national and state entities in the climate policy sphere. It is further argued that location, such as being near to the coast, has an influence on preferred climate actions.

Van den Bergh (2020) explores connections between greenhouse gas reduction goals in cities as they connect to actual policies. Proposed effectiveness is supported by three factors: reach, capability, and stringency.

Stone et al (2012) focuses on warming in cities caused by climate change and the effectiveness of state and local climate action plans in mitigating harmful effects. A trend representing temperature over time and space is introduced to judge policy effectiveness.



Figure 1. City of Long Beach skyline (Wang 2005)

Methods

The qualitative research method being used in this research is Discourse Network Analysis (DNA). Newspaper articles from Long Beach, California that pertain to the city's Climate Action and Adaptation Plan (CAAP) will be accumulated as chief source material. Newspapers that will be drawn from include the Long Beach Post and the Press-Telegram.

The DNA program allows coding of the articles for specific terms, individuals, or organizations involved in the conversation and creation of climate policy (Leifeld 2018), such as the CAAP. The DNA software will serve to organize and illustrate major players, their contributions to the Climate Action and Adaptation Plan, and their connections to climate change concepts and other actors.

Support or opposition espoused by stakeholders towards concepts will be clearly demonstrated.

The final step will entail the forging of connections and comparisons with the findings of the Discourse Network Analysis.

Results

Concepts	Key Points
Actionable Plan	Long Beach city planner, Alison Spindler, and marine scientist, Jerry Schubel, understand the threat of climate change to the City of Long Beach which is why there needs to be a plan to adapt to ever changing threats
Quality of Life	Residents, Unelected Officials, and City Council voice their opinion on improving quality of life of those within the city of Long Beach
Clean Energy	Residents want to focus on moving to renewable energies for the City of Long Beach. Gabrielle Weeks compared Long Beach oil drilling to Jenny Craig, a popular health program, that sells doughnuts and fried chicken. Councilwoman Jeannine Pearce had prioritized joining the Clean Power Alliance before she leaves office.
CAAP Target	Mitigated efforts from CAAP will bring us below the 2030 target for emissions (Figure 3)

Figure 2. Long Beach Consumption Inventory Emissions Summary
This figure shows the emissions by sector and subsector within the city of Long Beach according to CAAP (US EPA 2015).

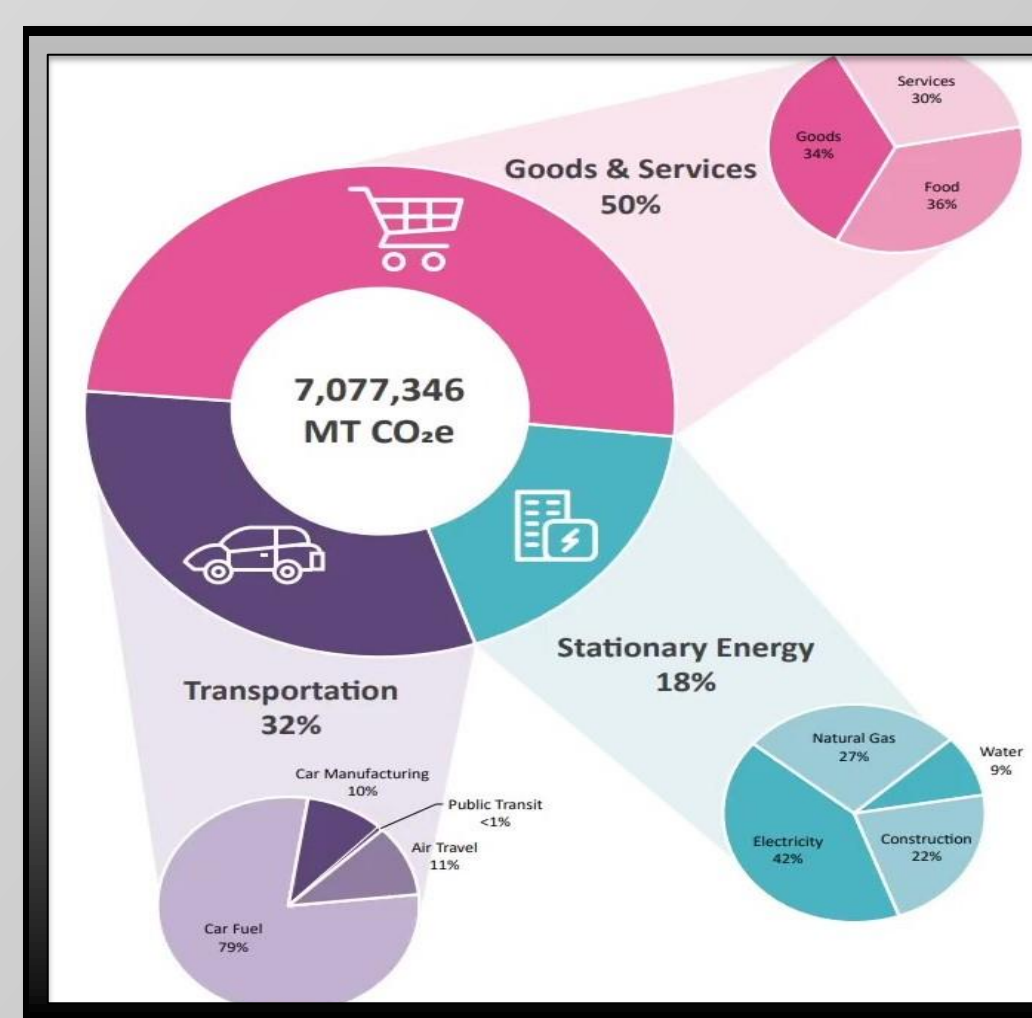


Figure 3. 2030 Reduction Target forecast compared to CAAP strategies being implemented (City of Long Beach proposed CAAP, 2020)

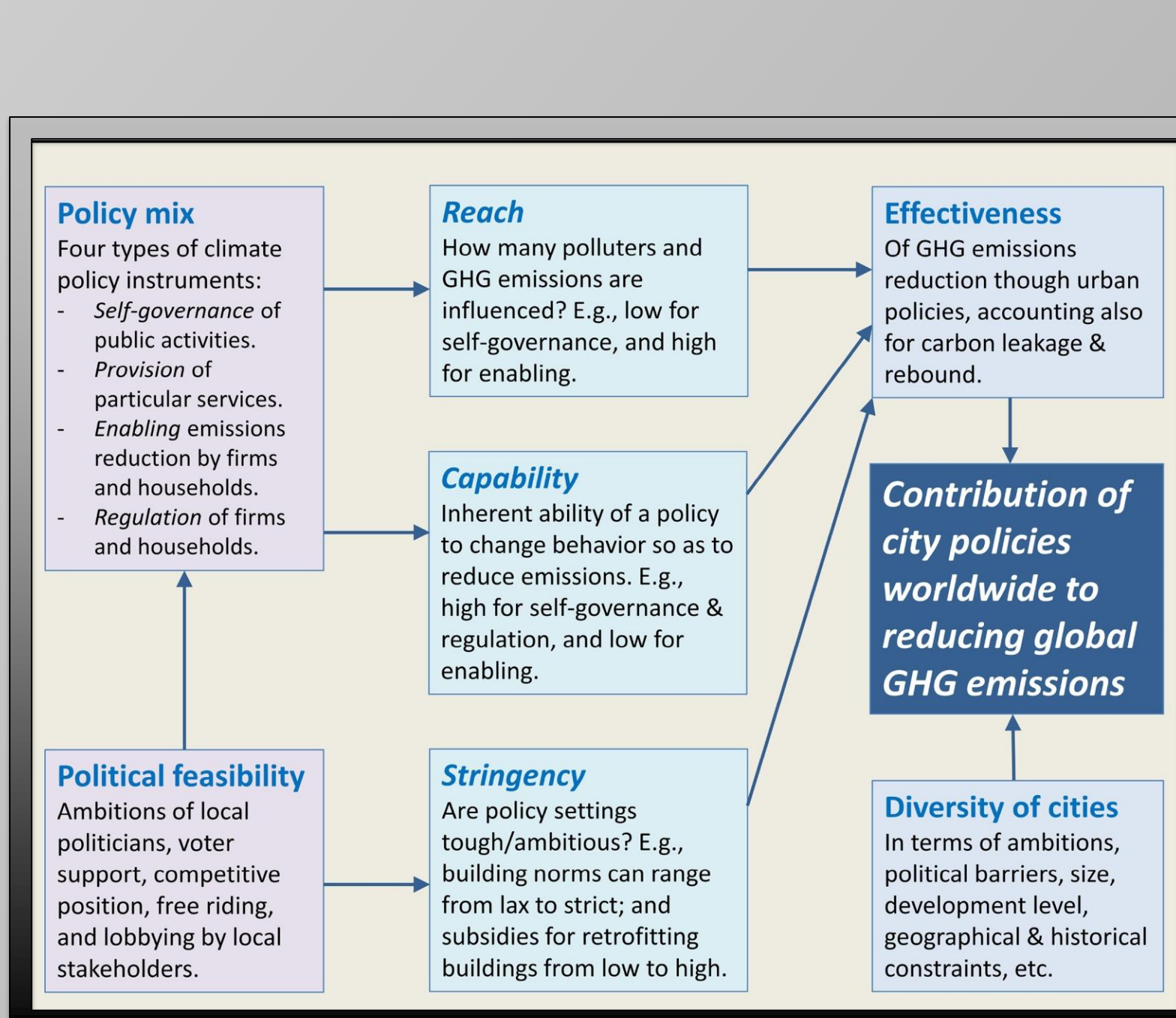
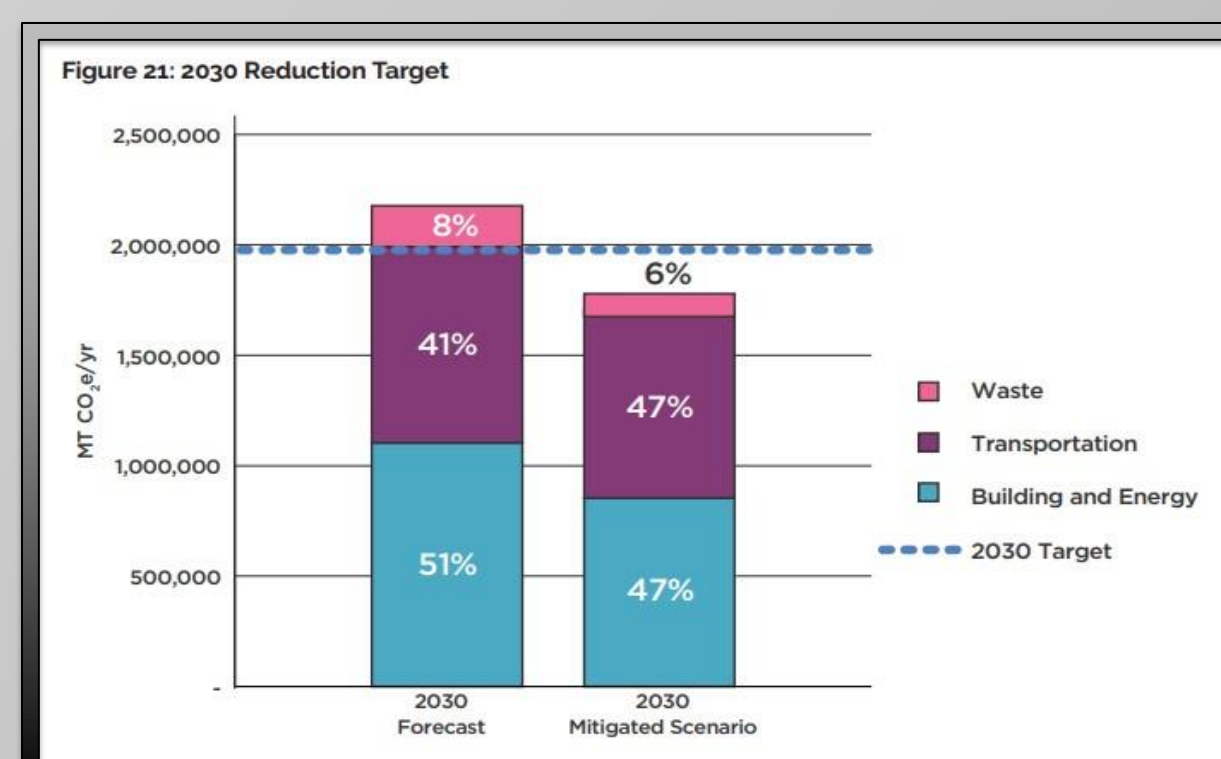
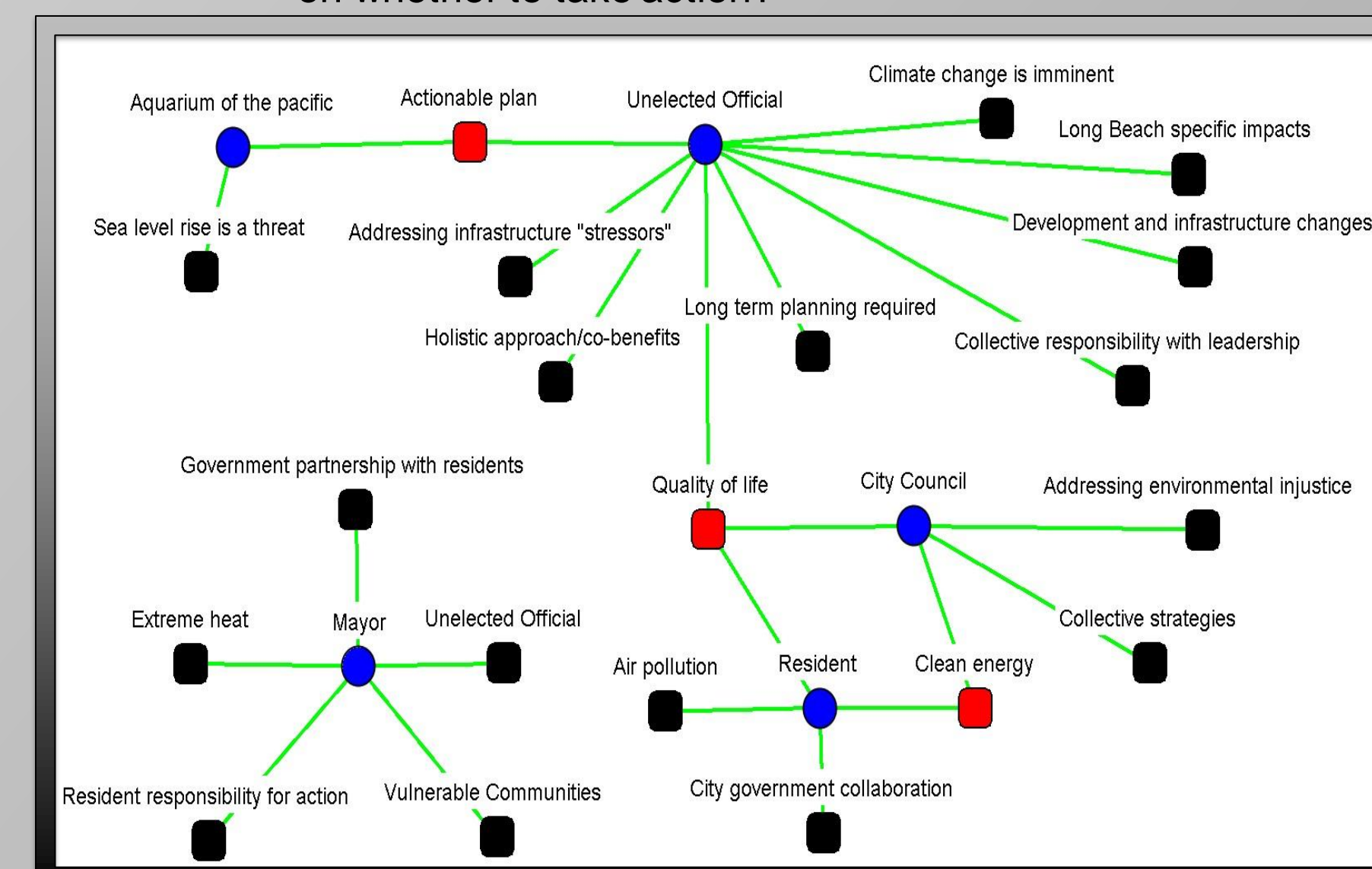


Figure 4. Greenhouse gas emissions reduction expected from urban climate policies (Van den Bergh 2020)

Discussion

- Actors involved (Figure 5)
 - Mayor, Unelected Officials (city planners, city manager, various city departmental staff), Aquarium of the Pacific, Residents, City Council
 - Mayor has different ideas for policy making than other actors
 - Unelected Officials are representing a wide range of ideas and solutions
 - Aquarium of the Pacific is prioritizing sea level rise that threatens the future of Long Beach citizens on the Peninsula and in Belmont Shore
- Cities – Reach, Capability, and Stringency (Van den Bergh 2020)
 - Reach
 - Municipal services located outside city jurisdiction
 - Capability
 - Public transport with more capacity, frequency, or speed
 - Stringency
 - Cities locked in path-dependency lead to difficult policies as people are against changing prior knowledge of a city
- California Cities (Wang 2013)
 - Location has an influence on importance of climate change
 - Local adaptation versus mitigation actions
 - Global vs Local
 - Political commitments and adoption of actions
 - Does a lack of repercussions affect politicians' decisions on whether to take action?



Legend

- Agreed Policy Ideas
- Policy Ideas
- Actors

Figure 5. Visone program connecting players to concepts involved in the CAAP

Conclusions/Policy Recommendations

In conclusion, the City of Long Beach is making headway in reforming climate change policy with the adoption of the CAAP in 2021. The focus on lowering city influence represents the awareness of the impact that urban areas carry for the climate. The city also has a better understanding of climate change risks due to its coastal geography (Wang 2013). Stakeholders have a large influence on the city's steps to take the steps highlighted in the CAAP. However, influence and/or representation of actors in news media discourse is unequal.

Analysis of the generated Visone visualization allows for a clear focus on existing actor networks or connections that can be tapped into for the advancement of municipal level climate policy. It is our recommendation that greater attention is afforded to where actors agree conceptually so that varied agendas can be brought closer together. Collective strategies are necessary for tackling climate change. This research shows that there is considerable work to be done in unifying actor networks with regard to espoused concepts.

For more information