
Case Analysis

Municipal Leadership of Climate Adaptation Negotiations: Effective Tools and Strategies in Houston and Fort Lauderdale

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Negotiation analysis of climate change-related issues has largely focused on public dispute resolution mechanisms that are typically applied in the face of specific environmental crises, or on multiparty diplomacy relating to international climate agreements. Mayors and other municipal leaders, however, are increasingly taking steps to negotiate urban planning efforts with stakeholders to implement policies for managing the intensifying impact of climate change. In this article, we analyze negotiations in Houston, Texas, and Fort Lauderdale, Florida, to identify which methods municipal leaders employed to conduct negotiations to implement climate adaptation policies and also consider whether those methods were effective. The two cities present two differing city management structures: Houston has a strong mayor-driven system, while Fort Lauderdale uses a city commission and city manager system. In this article, we examine the barriers that leaders must overcome and consider their options for negotiating lasting agreements.

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Introduction

Cities are on the front line of climate change. Severe storms and droughts are causing unprecedented human injury and property damage in municipalities across the globe. Addressing these damages is making increasing demands on city budgets. Each month in the first half of 2016 set an individual record as the hottest in recorded global temperatures (National Aeronautics and Space Administration 2016). Scientists have also recorded the lowest level of Arctic sea ice “extents” (extent is one type of ice area measurement) in five of the first six months of 2016 (National Aeronautics and Space Administration 2016).¹ In September 2016, U.S. President Barack Obama called current climate change predictions “terrifying” (Davis, Landler, and Davenport 2016).

Municipal leaders are increasingly seeking ways to pre-empt climate related crises in their communities by planning for climate change adaptation. Unsurprisingly, they frequently face significant barriers to implementing adaptation plans and consequently must negotiate to build public support for adaptation policies (Susskind et al. 2015).

Researchers have created a substantial body of work on climate change and negotiation.² There are no studies that we know of, however, that have isolated insights from municipal leaders’ efforts to negotiate climate change adaptation policies. Those insights could inform the implementation of policies elsewhere and open new avenues for study, especially given the increasing severity of climate change’s financial, infrastructural, social, and political impact on a growing number of cities. For example, the World Bank estimated that from 2010 to 2050 more than 80 percent of the overall annual global costs of adaptation to climate change will be related to impacts suffered primarily in urban environments (World Bank Group 2011). At the same time, the world’s population is rapidly migrating to urban areas. In 2014, 54 percent of the world’s population lived in cities. By 2050, population experts predict that figure will have increased to two-thirds (United Nations 2014).

For these reasons, it is crucial to understand which tactics and strategies can best help municipal leaders implement policies to address the effects of climate change. In this study, we broadly identify several negotiation strategies and tactics available to municipal leaders. We then explore which negotiation tools municipal leaders in Houston and Fort Lauderdale used in their cities to successfully gain approval for specific policies related to climate adaptation planning. We conclude with five prescriptive suggestions for

negotiating climate adaptation policies that we have drawn from analyses of negotiations in both cities.

Proven Strategies for Effective Municipal Climate Adaptation Policy Negotiations

Municipal leaders negotiate how to implement effective climate adaptation planning processes by identifying potential risks, assessing how to respond to them, and then implementing policies that reflect those assessments (Susskind 2010; Moser and Ekstrom 2010; Barros et al. 2014; Shi, Chu, and Debats 2015). In the process, however, they are often confronted with challenges that arise when people try to change longstanding government practices (Smith, Vogel, and Cruce 2010; Moser and Ekstrom 2012). Four barriers typically impede their ability to develop and implement policies: insufficient financial resources, absence of technically skilled staff, existing adverse policy regimes, and insufficient public support (Moser and Ekstrom 2010; Bierbaum et al. 2013; Aylett 2014; Hughes 2015).

While municipal leaders often begin to develop policies by assessing which climate conditions will most seriously affect their cities, even the most credible projections are often contested by constituent groups. Stakeholders, who often have differing interpretations of risk, subject such projections to significant scrutiny (Kahan, Jenkins-Smith, and Braman 2011; Renn 2011; Susskind 2015). Municipal leaders must also implement practical adaptation policies that respect constituents' claimed "sacred values" (Bazerman, Tenbrunsel, and Wade-Benzoni 2008).

For leaders to negotiate agreements within such a charged environment, they must determine when and how to deal with these stakeholders. They must address timing and related sequencing issues. Research has shown joint fact-finding to be among the most effective means of involving stakeholders, allowing for public input regarding which data should be used to develop sustainable proposals (Susskind, McKearnen, and Thomas-Larner 1999).

In the face of stiff opposition, municipal leaders can also treat major climate change-related emergencies as action-forcing events to push for sweeping planning and reform (Susskind 2010; Anguelovski and Carmin 2011; Jones 2013). Such tactics, however, can pose the risk of resource competition, siphoning funds and effort from other municipal initiatives, which can erode the natural coalitions within governments that are necessary for ensuring the successful implementation of climate policies (Measham, Preston, and Smith 2011; Carmin, Dodman, and Chu 2013).

As with all complex multiparty negotiations, attention to coalitional dynamics is essential for municipal leaders attempting to gain support within their own governments and overcome blocking coalitions that form among citizen stakeholders and groups (Susskind 1987; Crump and Susskind 2008).

Municipal leaders must therefore develop reasonable policies that are presented, revised, ratified, and implemented through carefully sequenced and managed processes (Susskind 1987).

The many useful tactics available to municipal negotiators include identifying, coupling, and de-coupling issues; trading on differences; and generating revised and flexible proposals—all in the hopes of weakening opponents' best alternative to a negotiated agreement (BATNA) (Lax and Sebenius 2006; Crump and Susskind 2008; Lax and Sebenius 2012; Thompson 2012).

Negotiating Flood Control in Houston

In 2009, Annise Parker took office as the sixty-first mayor of Houston. A former city councilor and city controller, Parker wanted to overhaul city government and hoped to use the office's executive authority to accomplish her goals (Institute of Politics 2016).³ Houston is America's fourth most populous city, an expansive metropolis with a population of 2.1 million and international prominence in shipping, energy, and technology (United States Census Bureau 2016). It is located in Harris County, the most populous county in Texas and third most populous county in the country, with a population of 4.1 million (Wikipedia 2016).

Parker believed that a lack of regulations, including the absence of a master zoning plan, hindered the city's ability to maintain infrastructure and deliver services (Parker 2016a). She anticipated that Houston's problems were destined to worsen because of the intensifying effects of climate change, and she was determined to help address the local threat through policy changes (Parker 2016a). Most problematic were water drainage issues that plagued the city. Houston lies along a flat plain that extends forty miles to the Gulf of Mexico and the region's clay soil resists absorption. Rainfall often arrives in torrential bursts, causing serious flooding that is worsened by storm surges that rush inland from the Gulf and cause drainage to overflow. In 2001, for instance, Tropical Storm Allison caused widespread flooding, killing twenty-two people in Houston and greater Harris County, and inflicting \$5 billion in damages (Parker 2016a, 2016b; Harris County Flood Control District 2016). The effects of Hurricane Ike six years later were even more severe.

Houston maintains a network of systems that capture water and deliver it to drainage networks maintained by Harris County. By 2010, the system needed serious repairs and upgrades. But the city failed to address these problems because the debt-based financing system used to maintain the system was costing taxpayers \$150 million in interest payments each year, leaving no resources for actual maintenance (ReBuild Houston 2016a).

Upon taking office, Parker created the position of sustainability director, but she chose to personally manage an effort to overhaul the drainage management system (Parker 2016a). With the city reeling from the 2008

economic recession, she confronted significant obstacles. To succeed, she would have to gain the support of powerful interests. Her first step was to envision an overarching framework for all major projects.

Framing and Forming a Coalition

Parker believed that initiating policies that were explicitly labeled as climate adaptations would fail. Instead, she couched her major initiatives as matters of fiscal infrastructure policy and insisted that any water management proposal be part of an effort to get Houston debt free (Parker 2016a, 2016b).

She eventually aligned herself with Renew Houston, a group largely comprising members of the Houston Council of Engineering Companies (HCEC). The group had strongly supported one of Parker's rivals in the mayoral election, but the engineers crafted a persuasive drainage infrastructure proposal that gained Parker's support. Together the mayor and the council formed a powerful coalition. The engineers were viewed credibly by members of Houston's energy, aerospace, and technology industries, who might otherwise oppose such wide-ranging reforms from a first-term mayor. In turn, Parker provided an extensive network of political allies (Parker 2016a).

Terms of an Agreement

A proposal to implement a drainage fee, named ReBuild Houston, was initially developed by the HCEC and its supporters, and refined in consultation with Parker. It identified four sources for funding an overhaul of Houston's water system. Most important among these was a newly devised fee to be assessed on all property owners based on the amount of impervious, water-resistant surface area on a given property. Parker carefully avoided calling the fee a tax, knowing that taxation would create insurmountable opposition from increasingly powerful anti-tax groups (Parker 2016a, 2016b).

The fee would create a "pay as you go" replacement for borrowing, enabling Houston to finance improvements up front. The plan would direct funds to areas of greatest need to quickly diminish the worst effects of flooding (Parker 2016b; Rebuild Houston 2016b).

This was a substantial proposal because Houston was alone among major American cities in its lack of fees, regulations, and planning. "It is the only major American city without zoning," Parker later remarked. "It was the only city in America without a drainage fee. It was the only city in America without a general plan. It is the only major city without a garbage fee" (Parker 2016b).

Parker put the proposed drainage fee forward to the Houston City Council in August 2010, requesting a ballot referendum to amend the city charter. Renew Houston presented thirty thousand signatures in support of her effort, and the council, which had vetoed a similar fee in 2001, approved the request to put the matter to voters in November (Olson 2016). Opposition groups quickly formed, assailing the fee as an unfair tax, and

arguing that Renew Houston's engineers would financially benefit if the measure passed (Miller 2010).

The coalition of advocates fought back, releasing estimates supporting the new model. The average household, they said, would only pay approximately \$5 per month (Lee 2011; Parker 2016b). The coalition also drew support from powerful constituencies including the AFL-CIO union and construction industry groups (Miller 2010.) In addition, Tropical Storm Hermine lent unanticipated credibility to their effort, by causing widespread damage as it moved through Texas in September 2010. Among the financial impacts of the storm, for example, the lucrative Ladies Professional Golf Association announced that it would no longer hold events in Houston because of the region's volatile weather conditions (Parker 2016a).

On November 2, 2010, Parker's coalition succeeded when the drainage fee passed by a slim margin of 50.94 percent. All that remained was for the city council to approve ordinances to launch ReBuild Houston that set the terms of the fee, but opponents were intent on continuing to fight the new system (Parker 2016a, 2016b).

Opposition Emerges

In the aftermath of the election, four powerful opposition groups challenged the fee, stalling its enactment. The city's eleven school districts demanded exemption as public entities, arguing that the costs of compliance were onerous. Harris County officials also objected, as did railway companies, whose tracks crisscrossed the city. Most importantly, an influential coalition of churches declared that the fee was a tax and claimed exemptions as religious institutions (Parker 2016a, 2016b).

Parker addressed each challenge differently, but steadfastly held that the proposition had enacted a fee, not a tax. She studied the relationship between rail companies and other cities that had enacted similar fees. At the same time, she quietly approached Harris County officials, with whom she needed to work on an array of sensitive issues, listening to their concerns, and incorporating them into a strategy to successfully implement the drainage fee. In negotiations with school officials, she argued that they stood to benefit, both financially and operationally, by paying into a system that would help alleviate flooding that directly affected their buildings as well as their students' families (Parker 2016a, 2016b).

The churches, however, remained the largest and most powerful opposition group. With memberships of more than two thousand each, Houston's megachurches occupy large structures with oversized impervious asphalt parking lots. The televangelist Pastor Joel Osteen's church alone claimed more than 43,500 members in 2015 (Hartford Institute for Religion Research 2015). Compounding their objection to the fee, many church leaders disliked Parker because she was the first openly gay mayor of Houston and were determined to ensure that she did not succeed (Parker 2016a, 2016b).

The quick resolution Parker desired stalled on multiple fronts. Unified agreement from the school districts proved elusive, public disagreement with the county was inadvisable, and the railway companies could challenge the proposition in court for years. Most of all, the churches could persuade the city council to stall for the foreseeable future.

Building a Coalition

Parker recognized that no agreement would come from direct negotiations with church leaders. She was seen as too extreme by church leaders and she perceived the same about them. She chose instead to structure a new negotiation.

Instead of conducting direct negotiations with the churches, Parker removed herself from the face-to-face negotiations and sent her legal counsel to negotiate with the city councilors who were supportive of the churches' interests. As a result, she also removed the churches from direct involvement in the negotiations (Parker 2016a, 2016b).

The subsequent negotiations produced an agreement. Existing church properties would be exempt from the fee, but not newly constructed churches. The agreement was also extended to the other opposition groups, exempting existing school, railroad, and county properties. On April 6, 2011, five months after voters approved the drainage fee initiative, the city council enabled the mayor to launch ReBuild Houston (Kervin 2011).

The Challenges of Implementation

The implementation of ReBuild Houston continued to face hurdles in subsequent years. Within months, Parker discovered that the estimated average household drainage fee of approximately \$5 per month was inaccurate. Instead, homeowners were assessed at an average monthly rate approximately \$3.25 higher. Facing angry citizens, Parker had the city absorb the difference, maintaining fees at the previously promised amount (Lee 2011; Parker 2016b).

Parker continued to meet frequently with civic groups to address concerns and fix unforeseen problems inherent to implementing a new initiative. Nevertheless, opposition, which included a lawsuit to stop the fee, persisted through the end of her term in office (*Dacus, Perez, and Jefferson v. Annise D. Parker and City of Houston* 2015).

Most surprisingly, the shift from the previous debt-based model to the pay-as-you-go failed to adequately address the system's financial problems. The new system failed to generate sufficient revenue in the first year to cover the debt obligations of the old system. The initial deficits led Parker to reflect later that, had she known, she would have abandoned the pay-as-you-go, long-term approach for an alternative financial approach that would have enabled, "massive projects right now, [to] solve your flooding problem" (Parker 2016b).

Outcome

Flooding remains a serious problem in Houston, exacerbated by worsening climate conditions and growth. Greater Houston has gained nearly two million new residents since 2001 (Texas A&M University Real Estate Center 2016) and record rainfall in April 2016 caused the worst flooding since Hurricane Allison (Lanza 2016). More than sixteen hundred homes in Houston flooded in a period of twenty-four hours, and at least eight people were killed (Lindner 2016; Sanchez 2016). In addition, a 2015 Texas Supreme Court Ruling dealt a blow to the initiative, finding fault with some aspects of the 2010 ballot campaign. The ruling did not invalidate the amendment, however, improving the odds that the agreement reached between Parker and her constituents will survive.

Along with her concerns about the transition to the pay-as-you-go model, Parker later reflected that her urgency to see ReBuild Houston launched may have led her to accept an agreement with her opponents that was more challenging to implement than she had anticipated (Parker 2016b).

Despite these setbacks, five years into the twenty-year plan, ReBuild Houston has raised more than one billion dollars, paid more than 20 percent of the debt from the old pre-fee system, and financed thousands of miles of road and drainage repairs (ReBuild Houston 2016c). After the early shortfalls, revenue spiked, generating \$304 million after expenses in 2015. The initiative's fiscal strength has generated continued political support from Houston officials; with increasing demands from extreme flooding, the additional funding gives the city more options with which to respond to a persistent and worsening problem.

Negotiating Seawalls in Fort Lauderdale

The "Venice of America," Fort Lauderdale, with a population of 172,000, is one of Florida's most vibrant cultural hubs and a hugely popular tourist destination. It is also increasingly subject to flooding from rising sea levels and intensifying storm severity. The city is most vulnerable to flooding during "king tide" events, when severe high tides occur when the earth, sun, and moon align. When a king tide coincides with heavy rains, Fort Lauderdale experiences extreme flooding.

Fort Lauderdale boasts 165 miles of canals connecting multi-million-dollar waterfront homes. It uses seawalls as a main defense against coastal flooding. The city is protected by 191 miles of private seawalls and four miles of city-owned seawalls. Seawalls, however, are not a perfect defense; a primary reason is that the city is built on porous bedrock that allows seawater to penetrate from beneath. "Imagine Swiss cheese," a senior engineer at the U.S. Army Corps of Engineers told a reporter, "and you'll have a pretty good idea what the rock under southern Florida looks like" (Goodell 2013). During king tides, seawater flows over seawall barriers, and during extreme high

tides storm water drain pipes fill with tidal water, preventing water from draining away from properties (Bagley 2016; Gassman 2016).

In 2014, the Fort Lauderdale Marine Advisory Board considered raising the allowable maximum seawall height (City of Fort Lauderdale 2016a).⁴ City engineers and a private seawall contractor reviewed the seawall ordinance and predicted that if seawalls were built to the existing maximum height of 3.9 feet, Fort Lauderdale could withstand the average high tide plus a one-foot king tide “while still providing additional height above the water for future sea level rise expected to occur within the thirty–fifty year lifespan of a seawall constructed today” (City of Fort Lauderdale 2016b). The Marine Advisory Board ultimately decided not to recommend changes to the seawall ordinance (City of Fort Lauderdale Staff 2016b).

Fort Lauderdale operates under a commissioner-manager form of government. The mayor and four elected commissioners serve on the city commission, which must approve all ordinance changes (City of Fort Lauderdale, FL: Government 2016). A professional, unelected city manager reports to the city commission.

In 2015, a severe storm coincided with a record-setting king tide, causing twenty-four inches in tide level increase, which was twelve inches beyond the board’s predictions and resulted in record flooding (Bagley 2016; McGuire 2016). This extreme high tide added urgency for the city commission to develop new plans to increase Fort Lauderdale’s resiliency (Seiler 2016). As a result, the city commission directed the city manager to propose seawall ordinance changes, establishing a minimum seawall elevation. Assistant Public Works Director Nancy Gassman, an experienced climate adaptation planner, was assigned to lead an ordinance team consisting of representatives from the city’s public works, sustainability, and attorney’s offices (Gassman 2016; see also Feldman 2016).

Framing and Forming a Coalition Agreement

The ordinance team knew that community approval would be critical in obtaining city commission passage of a proposed seawall ordinance. To ensure this outcome, the team used a collective problem-solving approach by first building consensus on proposed changes to the seawall ordinance within Fort Lauderdale’s city government (Susskind and Rumore 2015).

From the outset, the ordinance team sought input from other experts within various city departments, including engineers and city planners. Their collective input helped the team identify and prioritize all issues related to flooding and seawalls. Part information gathering and part consensus building, this approach also helped the team identify and negotiate an approach to deal with seawall-related issues that satisfied the needs and requirements of the different governmental agencies. After extensive internal consultation, the ordinance team wrote a “public discussion draft” to distribute for public comment.

While preparing the public discussion draft, the team also sought to involve stakeholders early to get feedback on the proposed ordinance language (Gassman 2016). They reached out first to the Council of Fort Lauderdale Civic Associations, an active coalition of civic and homeowner associations, to help publicize the project (Council of Fort Lauderdale Civic Associations 2016). The team knew the council would quickly disseminate details about the proposed seawall ordinance changes to a large number of people (Gassman 2016). Gassman personally attended the council meeting to explain the mandate and to urge the council to spread the word that the city was developing changes to the seawall ordinance. The council chairwomen expressed immediate concerns that the city was moving too quickly to allow for adequate feedback. In reply, Gassman assured the council that the ordinance team would solicit public response to the public discussion draft before the proposed changes were submitted to the city commission (Gassman 2016).

Terms of a Proposed Agreement

The ordinance team proposed three bold seawall ordinance changes in the public discussion draft. The first change would have required all seawalls in Fort Lauderdale to be raised eight inches over the existing maximum allowed height (City of Fort Lauderdale 2016c), and the second would have required the seawall heights be raised by 2035 (City of Fort Lauderdale 2016c). The team chose 2035 to coincide with Fort Lauderdale's "2035 vision plan" which strives to make Fort Lauderdale "a resilient and safe coastal community" by the year 2035 (City of Fort Lauderdale 2013; Gassman 2016).

The third change would have required property owners to properly maintain seawalls and repair any that are damaged. It also imposed a stringent timeline of 180 days to make necessary repairs. If a seawall needed "substantial repair," the ordinance would have required the property owner to rebuild the seawall to meet the new elevation standard as part of the repair (City of Fort Lauderdale 2016c).

Although these recommendations were bold, they failed to address the issue that some properties did not have, and were not required to have, seawalls at all (McGuire 2016). In fact, if a property owner's seawall needed "substantial repair," the owner could simply tear the wall down to come into compliance with the proposed ordinance (Gassman 2016).

The city commission wanted a proposal as soon as possible. To comply, the ordinance team set an aggressive schedule of two months for public comment on the public discussion draft (City of Fort Lauderdale 2016b). They scheduled five general public meetings that they thought would be sufficient to meet the stakeholder feedback criteria. Five meetings, however, soon proved insufficient. To meet significant stakeholder demands, the ordinance team held additional meetings with representatives of individual Fort Lauderdale neighborhoods, districts, and citizen groups. Intent on keeping

the commitment to the city commission to submit the seawall ordinance proposal in two months, Gassman and her colleagues worked tirelessly to conduct the necessary meetings.

Opposition Emerges

The team distributed the proposed ordinance to the public on March 31, 2016. It was first presented to the influential Marine Advisory Board on April 7, 2016. The proposed seawall ordinance changes were met with immediate and varied opposition (Gassman 2016).

Some homeowners in areas experiencing significant and repeated flooding expressed concern that the new proposals were too weak, both in regard to maximum height and to the length of time allowed for implementation: “[I]f you don’t hurry up and get this passed, my property values are going to crash and burn,” Gassman recalls one homeowner stating (Gassman 2016).

Others thought the proposed provisions were too stringent and costly. They also thought the time allowed for repairs was too short and that the 2035 deadline was too aggressive (Gassman 2016). Many property owners with seawalls that met existing code requirements resisted new codes that would require them to incur significant expense in re-building the walls to meet the new standards (Gassman 2016).

Still others perceived that a uniform seawall height requirement barred the flexibility needed to accommodate differing property elevations and flooding vulnerabilities. Proponents of this position argued that, because each property has a different vulnerability to flooding, the seawall ordinance should be individualized to each parcel (Gassman 2016).

Opposition also focused on the accuracy of climate change modeling projections, and on the ordinance team’s conservative decision to propose a minimum seawall height that adopted the worst-case projections for sea level rise (Gassman 2016). Others wanted evidence that increased seawall heights would provide greater protection against tidal floods before they were required to incur the expense of building or raising them (Gassman 2016).

The ordinance team listened to the stakeholder comments and Gassman recognized a “hunger for more information” from the concerned community (Gassman 2016). She also knew that the issues raised by this strong and varied opposition must be addressed because the community members and the powerful organizations they represented could block the proposed ordinance.

Building a Coalition

Gassman embraced the stakeholder-engagement process as an opportunity to educate the public on sea level rise’s impact on the city’s infrastructure and on the importance of public and private investment in adaptation planning and infrastructure. She also saw the stakeholder-engagement process as an opportunity to demonstrate to the public that the city was listening to its concerns and ideas and to demonstrate that the city was taking sea level rise seriously.

To provide information and build support for the proposed changes to the seawall ordinance, the ordinance team established a discussion forum on the Fort Lauderdale Sustainability Division website (City of Fort Lauderdale 2016c). This forum page included a copy of the public discussion draft, Gassman's slide show presentation to the Marine Advisory Board, and a regularly updated list of frequently asked questions (Gassman 2016). Responses to new questions were posted almost daily, resulting in thirty responses to a wide range of questions (Gassman 2016). The forum proved to be an effective information dissemination tool for Gassman to provide accurate information to address stakeholder questions and concerns about the proposed seawall ordinance changes.

On May 3, 2016, the ordinance team released a revised public discussion draft, now named the "commission consideration draft," which sought to balance concessions to property owners with the commission's mandate to make Fort Lauderdale more resilient against coastal flooding (Gassman 2016). To address concerns that raising existing seawalls was unnecessary and burdensome, the ordinance team made two critical concessions. First, it lowered the proposed minimum seawall height to match the current maximum 3.9-foot height allowed so that many of the existing walls met the ordinance height requirements (City of Fort Lauderdale 2016b). Additionally, the 2035 deadline to raise *all* seawalls to a minimum height was replaced by a requirement only for new walls and for walls needing substantial repairs. These important revisions neutralized criticism from property owners who had seawalls that met the existing seawall code requirements (Gassman 2016). According to Gassman, this allowed approximately "70 percent of the homeowners (to) take a deep breath and say, OK, it's not going to impact me" (Gassman 2016).

To offset these concessions, Gassman and her colleagues included an important future climate adaptation requirement that property owners would have to design new seawalls so that they could be raised in the future (City of Fort Lauderdale 2016b).⁵ In doing this, the ordinance team sought to minimize future costs to property owners if Fort Lauderdale leaders were compelled to again increase the seawall height requirements in response to increasing flooding severity.

To address concerns about flooding coming from neighboring property, the commission draft now gave the city the power to cite property owners for allowing tidal waters to drain from their property to their neighbor's property because of their failure to maintain or repair damaged seawalls or build new seawalls in a timely manner (City of Fort Lauderdale 2016b; Gassman 2016).⁶ The time to comply was also extended from 180 days to 365 days (City of Fort Lauderdale 2016b).

With few alterations, the commission consideration draft was submitted to the Fort Lauderdale City Commission for approval.

The Challenge of Implementation

Gassman knew that a more robust seawall ordinance would have little effect if it was not followed and that enforcement would be the primary challenge to implementing stricter seawall regulations. With almost 191 miles of seawalls currently in place, it would not be practical for the city to patrol seawalls looking for violations. Consequently, code enforcement will be mostly complaint-driven with “neighbors telling on their neighbors or neighbors complaining that it’s a city seawall that’s causing the problem” (Gassman 2016).

Furthermore, Gassman believed that complaint-driven enforcement would give much needed flexibility to the seawall ordinance by allowing the ordinance requirements to be adapted as the true effects of climate change are realized. According to Gassman, focusing on preventing damage to others “allows us to phase in the improvements as sea level rises into different neighborhoods, because you might not be causing problems between your neighbors today, but twenty years from now when sea level comes up, you might. So this sort of code enforcement will march through the neighborhoods as these high tide events become more extreme in different locations” (Gassman 2016).

Outcome

As evidence of Gassman’s and the ordinance team’s success, at the final two city commission hearings on the proposed changes to the seawall ordinance, only one public speaker addressed the city commission (Gassman 2016). On June 21, 2016, the Fort Lauderdale City Commission unanimously passed the city’s proposed new seawall ordinance (City of Fort Lauderdale 2016c).

Through this process, Gassman focused on presenting proposed changes to the Fort Lauderdale seawall ordinance that the city commission would readily approve. The ordinance team sought to make city commission approval easier by building a supportive coalition and building consensus by quickly addressing the concerns of opponents when possible.

Reflecting on the process, Gassman expressed her belief that it is often best to begin a substantial negotiation knowing what you want, but without knowing all of the potential objections. Early knowledge of future barriers may prevent a negotiator from aggressively anchoring negotiations sufficiently to succeed. “Ignorance is a very powerful tool,” she later reflected, “when doing the impossible”(Gassman 2016). To her, this philosophy applies in dealing with climate change as well as to her approach to Fort Lauderdale’s seawall challenges. She began the process “somewhat innocently saying, okay, these are the issues and these are the ways that we can fix them”(Gassman 2016). But from the stakeholder-engagement process, she learned that there were “more issues here than we anticipated”(Gassman 2016).

Conclusion

Municipal leaders who must negotiate climate adaptation planning and implementation have at their disposal a substantial array of strategic and tactical negotiation tools to help ensure the success of their efforts. The case studies of Houston and Fort Lauderdale suggest tools intuitively used by civic leaders who have had some measure of success. They also affirm previous analyses showing that stakeholders in highly public negotiations share some commonly identifiable interests and positions. Identification of these similarities should inform approaches to the setup and design of these kinds of negotiations.

In both cases, climate adaptation planning was initiated by civic leaders following their investigations of the relationship between worsening climate conditions, infrastructural vulnerability, and substantial municipal financial exposure. Both leaders identified the four common barriers to developing and implementing climate planning policies and came to similar conclusions. Both cities benefitted from a presence of technically knowledgeable, skilled staff, and stakeholders who understood that the process goal was to address the effects of climate change. Both municipalities then engaged in public negotiations to address adverse policies and, in the case of Houston, insufficient financial resources.

Between both cities, some commonalities are notable and suggest a prescriptive approach to guide similar negotiations. For instance, joint fact finding was used to build a coalition of stakeholders in developing proposals that were swiftly presented to a broad public. In addition, in both cases leaders expanded their supportive coalition by framing their objectives as fiscally oriented and prudent risk-management policies based on the flooding the cities had both already experienced. This worked by avoiding, for the most part, several potentially volatile issues including the controversy that often comes with policy planning based on uncertain and frequently divisive climate change modeling.

Opposition to the proposals stemmed from stakeholders' disagreements about how to assign responsibility and share the costs for pre-emptively addressing potential risks. In response, municipal leaders modified their agreements, sometimes making exceptions for particularly challenging opponents (i.e., Houston churches), and other times extending their provisions to all stakeholders. In both cases, targeted outreach indicated the city's commitment to an inclusive, results-oriented process, and created an opportunity for negotiations that resulted in legally binding written policy.

Civic leaders in both cities reached their target deal through a strategy driven by disciplined coalitional moves, careful sequencing, shrewd understanding of the barriers to an agreement, and the precise crafting and timing of compromises. Tactical choices moved negotiations forward on deadlines, as seen in the Houston ballot initiative and the Fort Lauderdale

council vote. Process choices worsened opponents' BATNAs, largely through transparent public engagement and information dissemination, ensuring that the potential for no deal was increasingly unlikely. For instance, in Houston, the passage of the ballot initiative made it impossible for the city council to avoid passing an ordinance, and Parker's refusal to negotiate directly with the churches cut off the potential for a recriminating back-and-forth that would have otherwise strengthened their BATNA. In Fort Lauderdale, Gassman's pursuit of internal consensus, extension of the draft review process timeline, and creation of public forums had the similar effect of creating opportunities to expand supportive coalitions while targeting the threat posed by an increasingly minority opposition. Even mistakes, such as the miscalculation of fee amounts in Houston, were leveraged to forge closer ties directly with constituents.

In both instances, leaders reduced tensions and overcame deadlocks at all costs. In Houston, Parker recognized that she was herself—apart from anything her office actually proposed—seen as extreme by her opponents. Consequently, she devised a process that included removing herself from direct negotiations along with the most incendiary stakeholders arrayed against her, an approach using surrogates and careful sequencing that ultimately resulted in the grandfathering agreement that overcame their opposition. In contrast, Gassman saw the need to personally engage repeatedly with citizen groups, seizing an opportunity to educate the public and demonstrate her and her team's expertise and goodwill.

Consequently, and with some caveats, we suggest that municipal negotiators facing similar issues should:

1. assess whether there is sufficient time and opportunity for a standard and lengthy municipal policy planning process to address their challenges, or whether an extraordinary process is required because of emergency circumstances;
2. ensure that their own team is in agreement on the proposed plan and that the team includes technically skilled stakeholders who are prepared to participate in a highly public, carefully sequenced, and highly adaptive process;
3. promptly seek and engage the public through outreach, education, forums, and electoral mechanisms;
4. revise their process and proposals publicly and demonstrably, re-sequencing and revising both to reflect public engagement; and
5. develop flexible and creative options to build consensus and overcome barriers, being careful to emphasize effective, accountable, and accurate policies as much as optimum policy positions.

Some of the practices we identified in these cases have relevance to negotiations beyond those related to climate adaptation. Most importantly, despite their best calculations of potential risk and exposure to climate effects, both cities sacrificed prompt implementation of stricter adaptation measures in favor of achieving compliance over the long term with lowered adaptation requirements. By extending the time for implementation, these cities face greater risk that climate change impacts will outpace their compliance timeframes. This appears to be the case in Houston, where the worsening effects of flooding in 2016 continued to overwhelm the city's water management infrastructure.

The process in both cities focused on concessions to stakeholders—such a process carries its own risks. On one hand, as seen in Fort Lauderdale and to a lesser extent in Houston, it can be argued that leaders only achieved agreement by making significant short-term concessions to reduce opposition. Such an approach, however, falls short of achieving the overriding goal of minimizing the city's exposure to climate change, especially in the long term. Worsening climate conditions will likely also increase the need to apply policies to larger segments of the population, reducing the efficacy of exemptions and increasing the need for more nuanced trade-offs.

Both municipalities used many of the techniques that would be recommended by trained facilitators, but contrary to common advice in literature on the subject neither chose to bring in outside conflict resolution facilitation (Susskind 2006). Some observers may conclude that skilled professional assistance with facilitation is therefore unnecessary, others would point out that the agreements might have been stronger if professional facilitators were involved.

The two policy-based negotiations observed here exemplify how ideas suggested in negotiation analysis literature have been used in practice. These cases also highlight negotiation tactics mayors and other municipal leaders can use to successfully implement adaptation policies to reduce the negative impact of climate change on their cities.

NOTES

1. "Extent" is a measure of ice area that includes all the area from the ice's farthest edges but does not deduct for melted areas, or holes, that fall within that larger fields; thus ice extent numbers are usually larger than ice area numbers.

2. For example, Lawrence Susskind has written extensively on the subject including a multi-volume edited work (see Crump and Susskind 2008; Susskind 2015). Substantial study has been devoted to international multiparty climate negotiations, largely beginning with James Sebenius's (1984) work. Recent edited volumes address a host of issues related to negotiation and climate change (see Sjostedt and Penetrante 2013). Outside of a domestic American urban municipal context, but with obvious relevance, is the megacity urban analysis conducted by Madhu Dutta-Koehler (2013).

3. The Mayor of Houston has a degree of mayoral authority that Parker characterized in interviews as unparalleled among major American cities (Parker 2016a, 2016b).

4. The Marine Advisory Board advises the city commission on all issues relating to Fort Lauderdale's important waterways including commerce, water focused environmental issues, storm preparedness, and response procedures; see Fort Lauderdale Municipal Code Art. 2 Sec. 8-34. See www.municode.com/library/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH8BO-DOBEWA_ARTIIMAADBO_S8-33RUPR.

5. In the ordinance that was actually adopted, this future design requirement was changed to a "strongly encouraged" recommendation (City of Fort Lauderdale 2016c).

6. The ordinance outlines that, if a property owner is cited for a seawall in disrepair or a seawall that is allowing flooding outside of the owner's property, the owner has one year to remedy the issue. A failure to comply after citation includes a requirement that the property owner appear before a Special Master, which could result in fines. The city can ultimately have the necessary work done and file a lien on the property for the costs.

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