Opportunity in the Complexity:

Recommendations for Equitable Climate Resilience in East Boston

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SUSTAINABLE SOLUTIONS LAB

East Boston's neighborhoods are stable, with a high rate of ownership despite changing demographics. Residential areas have continued to increase in value in line with current economic prosperity. Thus, land uses within residential neighborhoods have undergone little change. The future of East Boston neighborhoods should not be devastated by major land use changes for new development, but upon the minor land use changes to protect the existing quality of life.

East Boston Master Plan, 2000, p.35

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Working Paper

Patricio Belloy
Department of Public Policy and Public Affairs
University of Massachusetts Boston

Antonio Raciti, PhD
School for the Environment
University of Massachusetts Boston

Katsyris Rivera-Kientz
College of Liberal Arts
University of Massachusetts Boston

Rebecca Herst
Sustainable Solutions Lab
Director

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1. Executive Summary

East Boston is a diverse, working-class, coastal neighborhood of the City of Boston that is currently undergoing rapid gentrification. At the same time, local environmental problems – such as air and noise pollution from the operation of the nearby Logan International Airport – continue to harm residents, particularly the most marginalized communities. In addition to housing pressures and the pollution from Logan Airport, technical and scientific assessments warn that a large part of the neighborhood is at risk of being severely affected by climate change impacts such as sea-level rise, storm surges, and heatwaves.

City-led planning efforts and climate resilience strategies to address these interconnected challenges have, to date, prioritized the preservation of current power dynamics. These "business as usual" paths of development and residential mobility are aggravating patterns of overcrowding and displacement of long-time residents. Currently, proposed interventions, including hard, soft, and hybrid resiliency strategies, offer a wide range of opportunities to consider for planners, developers, and communities. However, they also raise the question of whether coastal protection interventions and localized co-benefits are sufficient to structure a comprehensive strategy that protects marginalized communities, improving their quality of life in the long term.

By drawing from literature in climate and environmental justice, this research (1) explores residents' priorities, (2) generates a better understanding of how these fit (or do not) in the current planning for a resilience public agenda, and (3) provides recommendations for local communities and planners to frame planning for resilience through a justice lens. Using a framework of just adaptation, we convey the residents' views about environmental concerns, access to open spaces and the waterfront, the housing crisis, education issues, and employment opportunities, alongside the power asymmetries currently existing in the relationship between the communities and the Massachusetts Port Authority, which is the owner of Logan Airport and the largest employer in the area.

Our research suggests that planning for resilience ought to be based on solid equity principles to concurrently address the most pressing economic, social, and environmental problems of East Boston. Our work in the field has led us to provide recommendations for communities to achieve increased and meaningful participation, strategies to address intersecting injustices, and a proposal towards a more incremental evaluation of planning objectives.

Recommendations:

(1) When reviewing de-designation, prioritize the vision East Boston residents have for access to the waterfront for community members and small businesses, particularly in the DPA parcel near the Central Square area.

Residents have expressed concern about the de-designation of the East Boston DPAs as a way to build more high-end housing. While the request from the Boston Planning & Development Agency to the Massachusetts Office of Coastal Zone Management dated January 30, 2020, acknowledges residents' preferences for more housing and open spaces in the underutilized waterfront areas, interviewees feared that the de-designation will attract more high-end housing development and aggravate the displacement already happening in the neighborhood.

Long-time residents share a desire for the community and small businesses to gain access to the Central Square waterfront. There are many reasons they value the site and would like increased access. Among these are the potential for increased connectivity with Boston (possibly with a dock), the landscape, and the view of stunning sunsets. They appreciate that there are examples of other cities like Portland, Maine, and Newport, Rhode Island, where the waterfront has managed to preserve small businesses that are owned by and employ members of the community. These changes would increase tourism possibilities and opportunities for the Central Square business district.

(2) Officials and proponents explaining complex ideas that will impact communities should be bilingual and able to engage in discussions in the native language of the majority of their audience.

Language barriers have contributed to a biased exchange of information leaving residents with the perception that they don't have a full seat at the table. While the use of translation services has increased, the level of translator proficiency is inconsistent and more complex ideas are only shared in English, with simplified versions shared in residents' native languages. At least one senior official from teams working with residents should be fluent in the language of the community and be accountable to them.

(3) To improve its relationship with the community, Massport should address the claims about its business model and political influence through a transparent community process with the assistance of independent facilitation.

Massport holds a disproportionate influence on the community's social and economic life and is in a position to invest in the future for those who are more marginalized. Several respondents identify Massport as a contributor to gentrification in the area via its connection with high-end developers. To improve its relationship with the community, it can take steps such as building space for local businesses on the waterfront, restricting multi-ownership, and supporting scholarships for students.

(4) Planning agencies and/or organized community groups should encourage the use of neutral professional mediators to help manage community engagement, build trust, and support the generation of a common vision for equitable climate resilience so that planning agencies are not in the double role of regulator and facilitator.

A substantial difference exists between the views about waterfront development held by planning agencies and larger organizations and groups representing Latino communities. In order to foster engagement and increased participation in community engagement processes, neutral mediators can help keep discussions effective, equitable, and ensure commitments are made. Those neutral mediators – funded but not necessarily hired by planning agencies or developers – could be chosen by community groups in agreement with a project proponent and/or other stakeholders, alongside the approval of the planning agencies.

(5) In addition to the idea of neutral mediation, a complementary proposal mentioned by a group of interviewees is that agencies should hire community organizers from East Boston and pay them for their time, instead of deploying their own staff to do community engagement.

While respondents did not criticize current staff working for planning agencies, they pointed out that the people doing outreach are not organizers and do not claim to be. To understand what the community is experiencing, having planning staff trained in outreach would, independent mediators, or community organizers could help generate a common vision on issues key for the neighborhood's future.

(6) The need for more incremental evaluation of planning objectives and development projects

Despite planning processes and promises to respect the character of the neighborhood, most interviewees feel dissatisfied with how waterfront development has transformed East Boston into a residential hotspot. The growing anxiety of vulnerable families displaced from their own neighborhood due to the rising cost of housing exposes the problems of long evaluation timeframes for being inconsistent with advancing justice.

(7) Establishing a permanent committee composed of officials, residents, and other relevant actors that – perhaps with the support of a university or other partner institution – is in charge of monitoring multidimensional indicators that can shed light on changing trends and better diagnose the state of community resilience in the neighborhood.

Continuous and participatory monitoring of variables like the value of property, residential housing stock and age, demographics, participation in hazard reduction programs, in addition to those related to health and quality of life, may help communities and planners understand not only the degree of fulfillment of planning objectives, but also how intended and unintended consequences emerge as a result of that accomplishment.

East Boston residents know that to create a truly resilient neighborhood a holistic approach is necessary, not one solely focused on the protection of the built environment. Overall, there is a general consensus that climate resilience should not

become another driver of gentrification and displacement in the neighborhood. Moving forward, it is essential that more voices from East Boston are part of shaping a vision to go from a resilient waterfront to a resilient community. The hope for East Boston residents is that climate action will be the vehicle to address historic systemic injustice and integrate protection from climate impacts with increased economic opportunities and social mobility for future generations.

2. Introduction and Report Methodology

East Boston is a neighborhood of the City of Boston that is undergoing rapid changes. The population of residents is shifting, and the appearance and character of buildings are changing. At the same time, local environmental problems such as air and noise pollution harm residents, particularly those in the most marginalized communities. In addition, East Boston is very vulnerable to climate change. Technical and scientific assessments warn that a large part of the neighborhood is at risk of being severely affected by climate change impacts such as sea-level rise, storm surges, and increased temperatures.[1]

Over the years, this complex outlook has been addressed through climate resilience strategies that, for the most part, perpetuate "business as usual" paths of development and residential mobility. More recently, however, East Boston community members and non-profit organizations have been demanding resilience strategies that address a mix of economic, social, and environmental problems.

The second phase of *Climate Ready Boston*, the ongoing *Plan: East Boston* process led by the Boston Planning and Development Agency (BPDA), and a recent recommendation from the BPDA to review the boundary of the East Boston Designated Port Area (DPA), present a new chance to determine the future of East Boston. These processes could provide a new opportunity to go beyond mainstream resilience strategies and implement new ones that are more equitable, increasingly participatory, and address historical injustices that block communities from accessing and enjoying the opportunities attached to Boston's thriving waterfront.

Because of this political opening, the Boston Waterfront Partners, a group of East Boston community-based organizations and other non-governmental organizations working on waterfront access and equity across the Boston Harbor, contacted the University of Massachusetts Boston's Sustainable Solutions Lab (SSL) to help them explore: **what should an equitable climate resilience strategy for East Boston include?**

SSL funded Patricio Belloy, a UMass Boston doctoral student in Public Policy to look at official planning documents and independent reports about the neighborhood generated in recent decades, review academic literature on climate justice and unintended consequences of climate resilience policy, participate in online community meetings organized by the BPDA and the Suffolk Downs mixed-use development, and

[1] Coastal Resilience Solutions for East Boston and Charlestown, 2017 (link)

conduct 17 semi-structured interviews with community representatives, organizers, representatives of the private sector, and residents of the neighborhood.[2] Data gathered from interviews and documents were analyzed and coded according to areas of inquiry informed by theory and salient themes presented by informants. Dr. Antonio Raciti and doctoral student Katsyris Rivera-Kientz, both from UMass Boston's School of the Environment, contributed to data interpretation and report writing.

By drawing from literature in Just Adaptation and Critical Environmental Justice, this report's assessments and recommendations address residents' priorities and offer a roadmap to help communities and planners frame and understand which elements of equitable resilience could bring together the characteristics of the neighborhood and the desires of the local communities. Given the complexity of the challenges East Boston faces and the intersecting problems its residents are dealing with, implementing these recommendations will not be easy.

Following this introductory section, the second chapter describes the neighborhood of East Boston and provides a summary of the challenges it faces in terms of climate resiliency, introducing a case study of Central Square and suggested strategies and interventions for increased resilience of the built environment. In section four, we use a framework for equitable resilience based on principles of just adaptation[3] to characterize the relationship between East Boston and the Massachusetts Port Authority (Massport); housing, education, and employment issues in the neighborhood, with a focus on small businesses; and residents' expectations for an accessible and enabling waterfront. Section five presents discussions and recommendations based on opportunities for increased community participation; ways to overcome language barriers; suggestions to improve Massport's role in the neighborhood and, in general, avenues to address systemic injustice and possibilities for more incremental evaluations for proposed climate resiliency interventions. The report ends with a concluding section that summarizes some of the findings of this study and recommendations from interviewees and the authors.

The authors would like to thank residents and other stakeholders[4] that supported this work, making this study just one of many efforts to help communities protect East Boston from the impacts of climate change and address their most pressing issues.

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[2] Regarding interviewees' affiliations, five of them are affiliated to East Boston community-based organizations; three are advocates in local NGOs; three are part of local businesses and business associations; three of them work at non-profits, including East Boston anchor institutions; two are politicians that have represented or currently represent the neighborhood; and one interviewee is a planning official. Also, 12 of the 17 interviewees are East Boston long-time residents, of which seven are female and five are male; six of them are Hispanic; five non-Hispanic whites; and one non-Hispanic mixed race.

[3] Malloy & Ashcraft, 2020.

[4] We would like to thank the Boston Waterfront Partners, in particular Deanna Moran and Aaron Toffler for their guidance during this work and thorough revisions. We also would like to thank Melanie Long, Paul Kirshen, Marisa Grenon, Liz Simpson, Magdalena Ayed, Chris Marchi, John Walkey, Sarah Horsley and all the interviewees who supported this research project.

3. East Boston and Climate Resilience

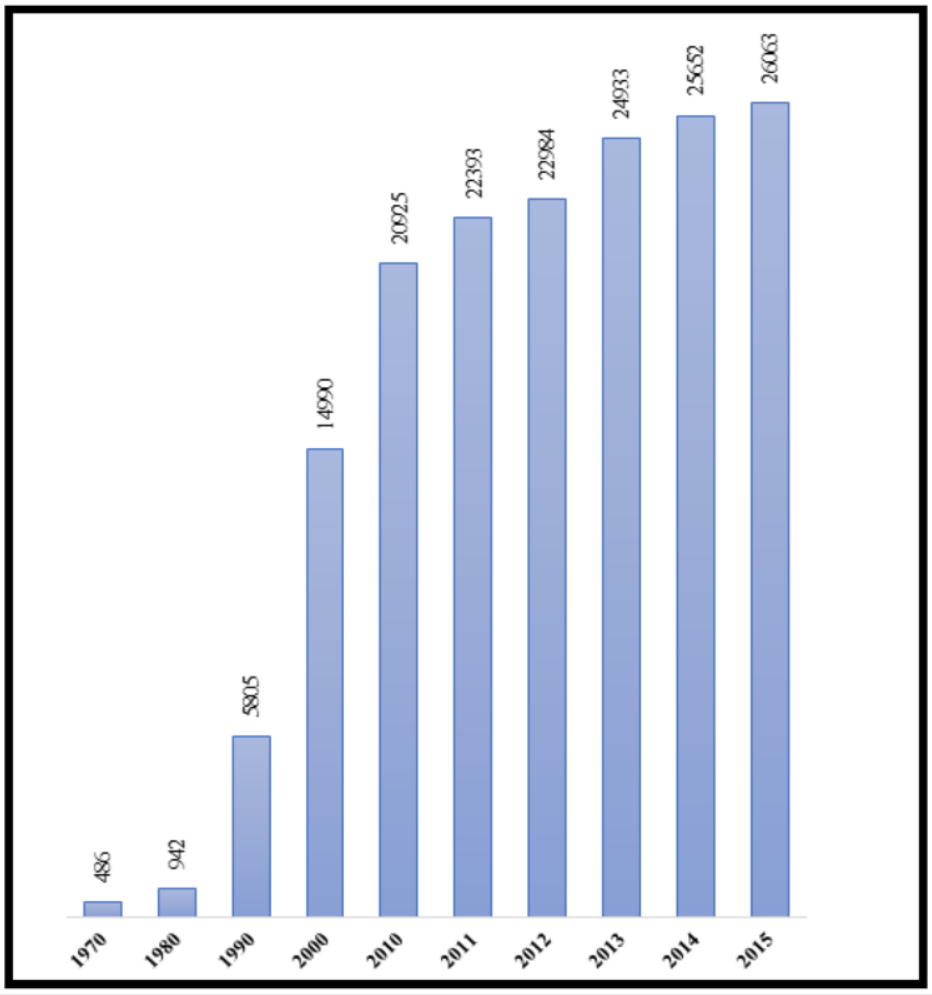
East Boston is a 4.7 sq mi peninsula located east of Boston Harbor and is home to over 47,000 residents.[5] The current shape of the neighborhood emerged from several individual islands connected through landfill operations during the 1940s. Historically and through the present day, East Boston has served as a gateway and home of people arriving in New England from all over the world.

Image 1: East Boston Immigration Station under construction, Marginal Street in background (early 1900s), courtesy of the National Archives and Records Administration, College Park, MD.
Source: The East Boston Immigration Station report, Massport, 2012.

Despite an industrial past – a legacy that left a trail of pollution and vacant waterfront land – East Boston slowly transitioned to a service-oriented economy that benefits from a dynamic landscape of local businesses and restaurants. In addition, jobs are provided by Logan International Airport and associated companies. Logan expanded from a smaller airfield to cover half of the area of the neighborhood during the 1940s and 50s.

East Boston residents come from different cultures and backgrounds but, despite these differences, they generally identify themselves as family-oriented and working-class. In the 1990s, the neighborhood started to become the home to Massachusetts's most significant Latino community. Hispanic or Latinos currently make up more than half of East Boston residents.[6]

[5] ACS, 2019
[6] American Community Survey (ACS) 5-year Public Use Microdata Samples (PUMS), 2019



Graph 1: Hispanic or Latino population in East Boston, 1970-2015
Source: U.S. Census Bureau data, retrieved from refugeesintown.org

Around the same time, the boom of the knowledge, health, and tourism economies that started in the 1980s with the "Massachusetts Miracle"[7] kickstarted the arrival of middle-class/highly skilled professionals to the Greater Boston region. This type of immigration has transformed neighborhoods like East Boston into a target for high-end condos and their associated amenities, aimed at more affluent residents.

This change may be the product of market forces but planning efforts have also played a role; for example, by explicitly calling for more development to revitalize vacant and heavily polluted areas created by the demise of industrial activity. The East Boston Master Plan,[8] issued in 2000, called for new residential development to restore uninviting waterfront areas, while the East Boston Municipal Harbor plan,[9] in 2002, reinforced that focus and set the additional vision for these interventions to enable

[7] The Massachusetts Miracle was a period of economic growth during most of the 1980s. Before then, the state had been hit hard by deindustrialization. During the Miracle, the unemployment rate fell from more than 12% in 1975 to less than 3%. (link)
[8] East Boston Master Plan, 2000 (link)
[9] East Boston Municipal Harbor Plan, 2002 (link)

economic activity that could benefit the neighborhood and the City of Boston in general. Since then, changes in lifestyle, market forces, and the vision defined by planners and developers have pushed for a neighborhood that today not only presents a brand-new face for visitors, but also several changes for long-time residents.

Image 2: Image advertising elevated luxury waterfront condos in the 478-unit Clippership Wharf, East Boston (2020)
Source: elevatedboston.com

In addition to the challenges from these demographic and economic shifts, the threat from a changing climate and its associated impacts is endangering the safety of a large part of the neighborhood. East Boston is surrounded by water on three sides; during a flood, water will increasingly flow into the infilled low-lying areas that were originally the space between the islands.

According to the Climate Ready Boston report,[10] as a quasi-insular neighborhood East Boston is expected to be one of the most impacted areas by flooding caused by the combination of sea level rise and storm surges. As seen in image 3, within the next few decades the southern part of East Boston will be exposed by the East Boston Greenway, while the blocks located south of Bennington St. will be exposed by a water entry point located west of the entrances of the Callahan Sumner tunnels. Approaching 2070, with intensified sea level rise, the northern areas of East Boston are expected to experience an increased risk of flooding. Given this reality, serious climate adaptation actions are necessary to prevent potentially catastrophic flooding in East Boston.

> *East Boston has the most land area of all Boston neighborhoods exposed to coastal storms in the coming decades, with exposure concentrated near the East Boston Greenway, Maverick Square, and the Sumner and Callahan Tunnels. Nearly 50 percent of East Boston's land area will be*

[10] Climate Ready Boston (2016) is an initiative to prepare the City of Boston for the long-term impacts of climate change. It developed a vision for coastal resilience planning in the neighborhoods of Downtown and North End, East Boston, Charlestown, South Boston, Moakley Park, and Dorchester. (link)

exposed to coastal flooding at the 1 percent annual chance event as soon as the 2070s.
Climate Ready Boston

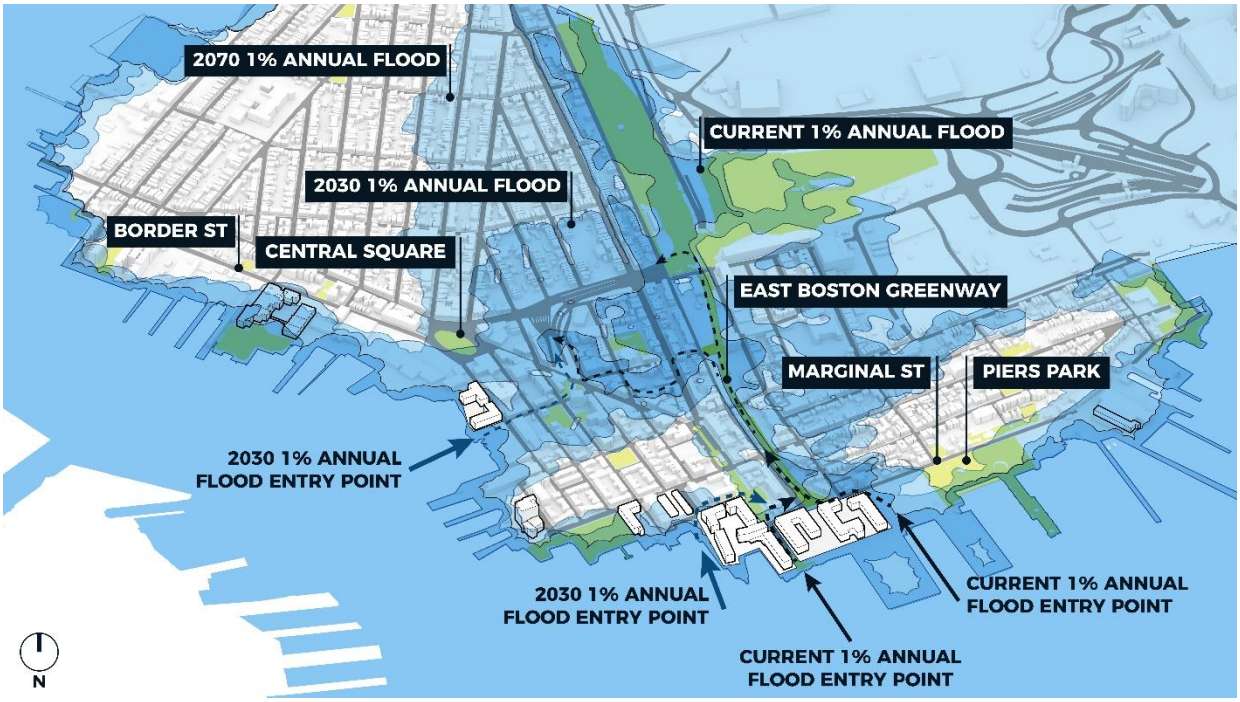


Image 3:
Source: Climate Ready Boston, 2016

The Climate Ready Boston Report sketched scenarios to elevate the coastline and protect East Boston in key flood entry points of the neighborhood (see image 4) in line with coastal adaptation actions to prepare for a world where climate impacts are intensifying rapidly.[11] Some of those water entry points experienced significant flooding during the winter of 2018 when the simultaneous occurrence of an astronomical high tide, storm surge, and sea-level rise caused water levels that flooded streets in several low-lying areas.[12]

[11] Lenton et al., 2019
[12] Lynds, J. Another Storm and More Flooding. *East Boston Times*, 10 March 2018. (link)

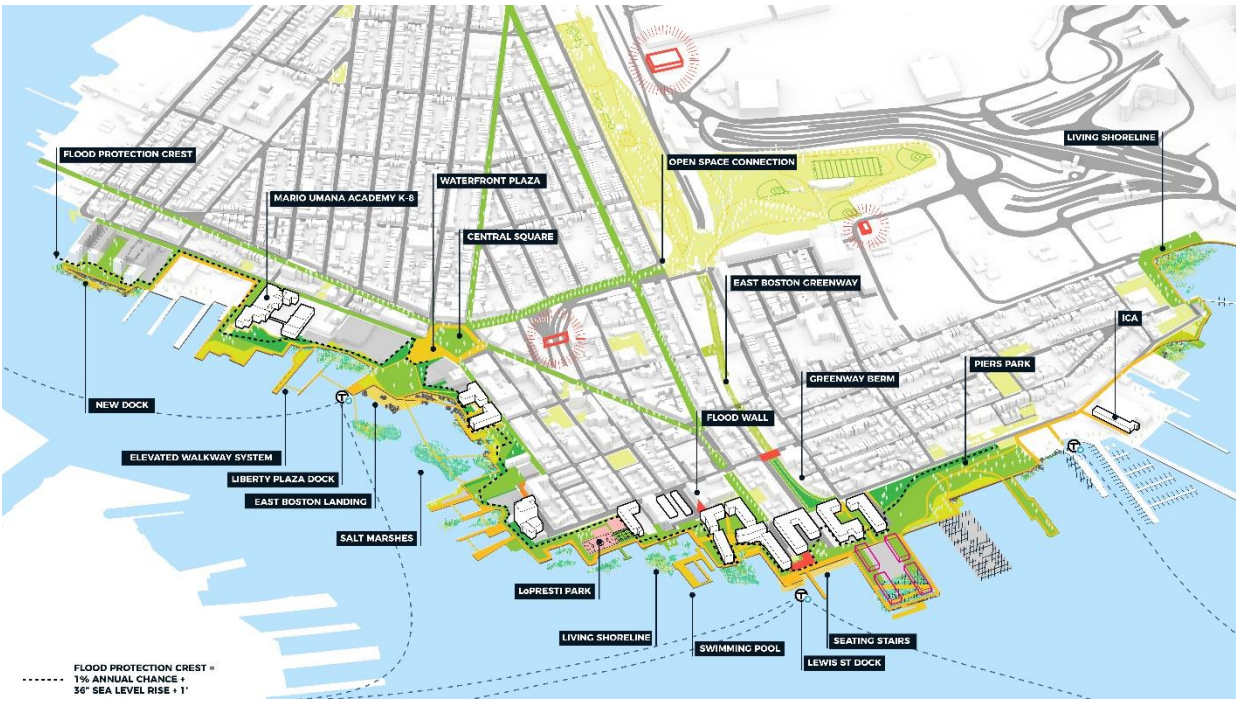


Image 4: East Boston long-term resilience waterfront strategy
Source: Climate Ready Boston, 2016

Box 1: Climate Resiliency and the DPA in Central Square

Central Square is a vibrant center of local business and a traditional meeting point for the East Boston community. Although it is defined as a broader area that reaches Eutaw Street to the north, the square itself is located at the intersection of Border, Saratoga, Meridian, and Central Square streets. It is separated from the waterfront by Border Street and Liberty Plaza, a strip mall that includes a parking lot and two buildings hosting chain stores and a supermarket.

Central Square is labeled as the Border Street Priority Area by Climate Ready Boston. The zone experienced heavy flooding during the 2018 storms and continues to be at risk, particularly when considering the nine inches of sea-level rise predicted by 2030.[13] The Climate Ready Boston report warns that planning and regulatory measures, including changes in zoning, are needed to protect the area, so a unified coastal solution could be developed through a mix of public and private investment.

The area is important to East Boston residents because of its historical role as a hub in the neighborhood. Many residents would like for the open space from the square to expand to the west and increase access to the waterfront, not only because it is aesthetically appealing as a viewpoint for sunsets, but also because a dock in that

[13] Boston Research Advisory Group (BRAG), 2016. Climate Change and Sea Level Rise Projections for Boston, MA. (link)

location would increase maritime connectivity options to Downtown Boston and other areas of the harbor, among other opportunities.

Climate Ready Boston produced a vision for Central Square's coastal protection with co-benefits such as open areas, a waterfront plaza, floating green and grey interventions, and docks that would improve maritime connectivity (see image 5). Interviewees were concerned that the vision, which is very focused on open space and climate resilience, may not be implementable in the area due to limitations set by private ownership of the strip mall, Chapter 91[14] requirements, funding possibilities, and associated trade-offs to carry the project forward. In addition, and particularly relevant for this study, portions of the areas included in the vision lay within the Designated Port Area (DPA)[15] of East Boston. This means that in order to make the vision a reality those areas would need to be de-designated.

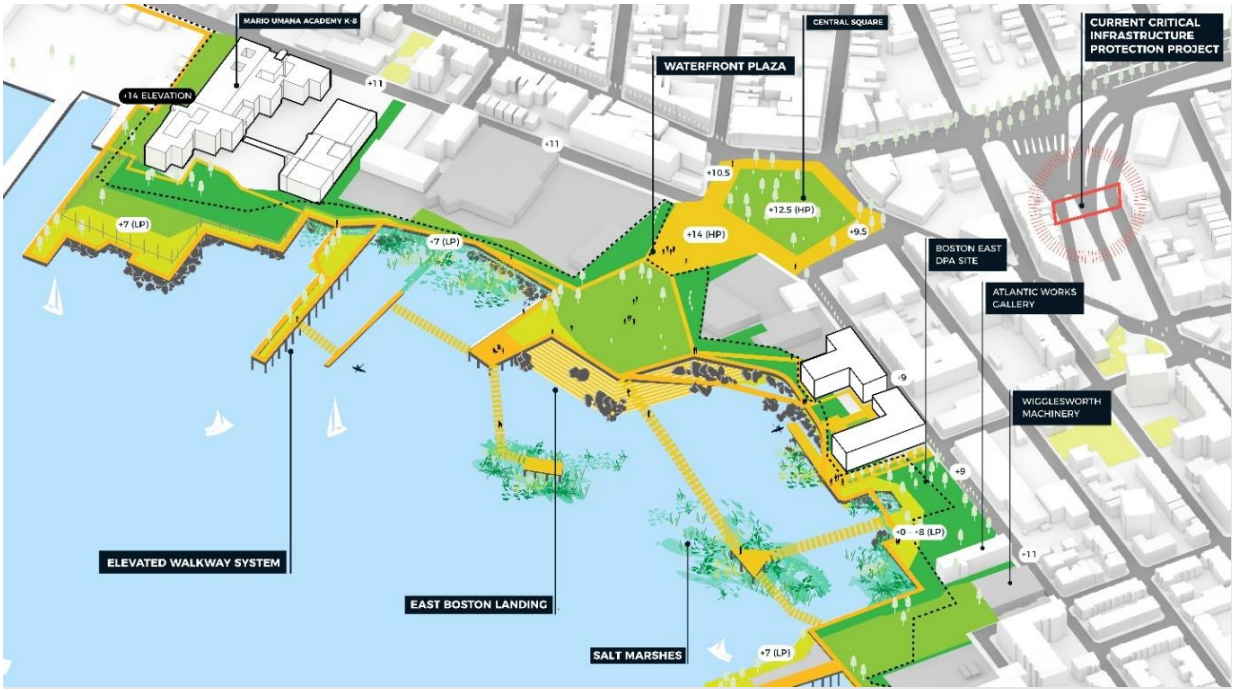


Image 5: Vision for the Border St. priority area
Source: Climate Ready Boston, 2006

The Designated Port Area (DPA) in East Boston's Central Square

DPAs in Massachusetts were established in 1978 to protect coastal areas that, due to their physical and operational characteristics, are ideal for water-dependent industrial uses and commercial activities that rely on marine transportation, like

[14] The Massachusetts General Law Chapter 91 is the Commonwealth's primary tool for protection and promotion of public use of its tidelands and other waterways. (link)
[15] Designated Port Areas (DPAs) were created to promote and protect water-dependent industrial uses through particular physical and operational features—such as commercial fishing, shipping, and other vessel-related marine commercial activities—and/or for manufacturing, processing, research, and production activities that require marine transportation or need large volumes of water for withdrawal or discharge. (link)

commercial shipping and fishing or product manufacturing and processing facilities. The policy aims to secure essential infrastructure like waterways, backland space, and transportation and public utility services that support the preservation of a marine industrial sector. In the case of East Boston, the DPA aims to protect and support critical activities like marine construction, small vessel supply and repair, barge and water transportation services, operation of tugboats, and construction staging areas. In contrast to the other three DPAs in Boston Harbor (South Boston, Mystic, and Chelsea Creek), the East Boston DPA is not geographically contiguous, but comprised of smaller, disconnected parcels that are less integrated and therefore less able for larger-scale water dependent industrial activities. Three of the parcels are located along Border and New Streets. The fourth parcel is in the Jeffries Point neighborhood, to the southeast.

In early 2020,[16] the Boston Planning and Development Agency (BPDA) submitted an application to the Massachusetts Office of Coastal Zone Management (CZM) to request a boundary review and consider the removal of certain portions within the four parcels of the East Boston DPA. Flood vulnerability was stated as one of the factors to justify this action, in addition to the lack of active water-dependent industrial activity, landside infrastructure, or maritime services – which are at the core of the designation[17] (see image 6).

[16] Processes of DPA areas de-designation in East Boston have already happened in 2002 and 2008.
[17] Letter from BPDA to CZM "Request for East Boston Designated Port Area Boundary Review", January30, 2020. (link)

Image 6: Map showing the 36 portions of the DPA that are under review.

Source: Annex A, letter from BPDA to CZM "Request for East Boston Designated Port Area Boundary Review"

Image 7: Zoom to the DPA boundary in front of Central Square, one of the four parcels under review. Source: CZM East Boston DPA

It is not clear whether CZM will consider flooding risk concerns in a DPA boundary review or if resilience strategies, such as those suggested by Climate Ready Boston, or other ideas from the community, are compatible with the uses envisioned for existing DPAs. This means that, if CZM rules that the Central Square waterfront remains in the DPA there may be no catalyst for addressing the flood risk. For example, Liberty Plaza, the strip mall that occupies most of the area that remains within the DPA, is privately owned. As a result, plans for any type of development or climate resilient infrastructure must be negotiated with the owners. According to the BPDA, there is currently no development proposal for this privately owned area. Regardless of the outcome of the DPA boundary review, there is general agreement that East Boston needs to consider different options to protect its waterfront.

On the other side, residents have expressed concern about a potential free way to build more high-end housing in case the portions under review are finally de-designated. While the request acknowledges residents' preferences for more housing and open spaces in the underutilized waterfront areas, as stated in the East Boston Master Plan (2000), interviewees feared that the de-designation will consolidate the change of aspect of the neighborhood, as exemplified in the DPA de-designation request to CZM:

> *The existing waterfront industries had to adapt to constraints of existing conditions, including continuing residential development and transportation connection limitations imposed by existing street network [*sic*] and traffic conditions.* ***Nevertheless, economic and cultural changes of East Boston's Harbor and related neighborhood present many opportunities for a modern waterfront today.***
>
> **Letter from BPDA to CZM "Request for East Boston Designated Port Area Boundary Review" (p.3, our emphasis)**

3.1 Alternatives for climate resilience interventions in East Boston

While there are many climate resilience strategies outlined in the Climate Ready Boston report[18], like creating a coastal protection system to address flood risk or expanding the use of green infrastructure and other natural systems, many of them are not currently feasible due to existing rules and regulations. Given these implementation hurdles it may be worth exploring other options. Some examples which might be relevant to the East Boston waterfront can be found in ports and coastal cities in the US and other countries, which have developed a series of strategies and interventions aimed at increasing climate resilience in port areas. Those strategies may involve *hard*[19] *soft*[20] and *hybrid* and are planned and implemented by different parties according to their laws and regulations. Each intervention addresses different climate hazards and considers co-benefits and potential adverse impacts.[21]

Among examples of soft interventions are the incorporation of absorbent landscapes, vegetated recreational pathways, and ecological networks; construction and restoration of wetlands, coastal greenbelts, and natural terracing; and non-infrastructural initiatives such as changes in planning, policy, management, and operations. Examples of hard interventions include coastal armoring, the elevation of existing structures, including critical systems and equipment, deployable sea gates, port sea defenses like breakwaters or artificial reefs, elevated roadways, and barriers around individual assets. Generally, hybrid strategies relate to a combination of hard and soft approaches, including wetproof construction, restoration of barrier islands, and man-made oyster reefs.

Co-benefits vary according to the types of intervention, but those for soft and hybrid strategies may include habitat creation, cooling capacity, reduced erosion, water quality improvement, improved aesthetics, recreation opportunities, and open spaces. Those associated with hard solutions mostly relate to the creation of functional infrastructure and long-term economic efficiency due to reduced maintenance over time

[18] Climate Ready Boston, 2006 (P. 30-32)
[19] *Hard* interventions consist of physical design, structural, or engineering approaches.
[20] *Soft* interventions encompass nature-based infrastructure and non-infrastructural initiatives such as changes in planning, policy, management, and operations.
[21] All the information in this subsection was by generated by Marissa Grenon in parallel to this research, 2020, unpublished.

compared to soft interventions. For the East Boston case, there are multiple laws and/or regulations that need to be addressed to implement working port resilience strategies, such as the Boston Wetlands Ordinance (BWO), Chapter 91, the Massachusetts State Environmental Policy Act (MEPA), the Massachusetts building code, and existing DPA regulations.

The described interventions offer a wide range of opportunities to consider for planners, developers, and communities, but they also raise a question about whether coastal protection interventions and localized co-benefits are, by themselves, enough of a comprehensive resilience strategy that protects communities and improves their quality of life in the long term. **To achieve this objective, particularly in a neighborhood that is already burdened with social, economic, and health problems that are likely to be aggravated by climate impacts, a climate resilience strategy should also be based on equity principles.**

4. A framework towards equitable resilience

In order to achieve true climate resilience in the long-term, a number of authors have argued that it is essential to look beyond coastal protection interventions and understand the broader systems at play.[22] Since a more holistic strategy is necessary, this study will adapt Malloy and Ashcraft's *framework for implementing socially just climate adaptation*[23] to categorize those conditions under which climate adaptation efforts can address social justice in East Boston. This framework focuses on three key conditions.

- ***Just adaptation demands the inclusion of socially marginalized populations as full participants with agency to shape the decisions that affect them*.** This requirement looks to recognize the strengths and deficits of marginalized populations and promote their participation and agency in climate adaptation processes. The theory states that, normally, adaptation planning and implementation occurs through structures whose processes risk reinforcing existing vulnerabilities and unequal outcomes, in addition to vulnerability assessments that, if conducted only by external "experts" or actors that are not fully representative of the whole community, may end up increasing the marginalization of vulnerable groups. In section 4.1, this condition is analyzed through the residents' views on their participation in community engagement processes and their relationship with the public and private actors leading them. Then, section 4.2 explores this idea further with a closer look at the relationship between East Boston residents and the Massachusetts Port Authority.

- ***Just adaptation requires that adaptation framings explicitly recognize the causes of systemic injustice.*** This highlights the tension that adaptation policies and plans usually focus on vulnerabilities but rarely look for solutions addressing the root causes and systemic injustices causing them. The framework states that even if an adaptation strategy explicitly tries to balance environmental benefits and burdens in a community, the risk of ignoring the sources of those vulnerabilities may persist. To

[22] Fitzgerald, 2020; Anguelovski et al., 2016; Shi et al., 2016.
[23] Malloy & Ashcraft, 2020

assess how adaptation strategies might address these causes, section 4.3 explores the issues of housing, education, employment and small businesses with the goal of understanding some of these deeper systemic injustices. This section also highlights some opportunities that are available for East Boston's most marginalized residents and some of their ideas for how to address these challenges and move toward deeper resilience.

- ***Just adaptation requires a focus on incremental evaluations of implementation to avoid timeframes inconsistent with advancing justice.*** Most evaluation of policy implementation assesses whether policy objectives are achieved or not. The timeframe for top-down evaluation of policy implementation regularly takes years and even decades. This multi-year evaluation approach misses shorter-term, incremental processes during which marginalized groups may enter decision-making spaces or be pushed out of them. These stakeholders include new citizen groups, organizations representing new or expanding communities, and resulting coalitions that can potentially engage in continuous, incremental implementation and evaluation of policies and plans. In section 4.4, the study looks at residents' opinions about the goals of waterfront development established in previous plans and reports and suggests elements that should be integrated into a vision for the Central Square area.

After applying the just adaptation framework to help understand the current situation in East Boston, section 4.5 lays out a number of specific ideas or recommendations that interviewees proposed.

4.1 The first condition of Just Adaptation: the inclusion of socially vulnerable populations as full participants with agency to shape the decisions that affect them.

> *It is looking better over the past year, but there is still a need to develop stronger relationships with local groups, not just when you [the agencies] need them, but also long term, so they [the community] become part of the process from the beginning, not just when they [the agencies] need the community input.*
> **East Boston Latina organizer**

According to most respondents, planning agencies and developers looking to build in East Boston have tried to improve outreach and engagement with the community in the last couple of years. They mention that now there is more effort to involve organizations and residents. A BPDA representative acknowledges that East Boston is a relatively organized community, which helps to make their community engagement processes more effective by reaching more people. However, most respondents also acknowledged a historic dissatisfaction with the processes.

In general, interviewees expect more and better outreach and engagement, particularly from the City of Boston, private developers, and Massport. Community representatives typically agree with the process's goal, but participation barriers end up making them undemocratic. They noted that the lack of proper outreach in different neighborhoods caused communities to miss information generated in meetings

organized in previous planning phases. For example, a couple of interviewees mentioned that the city is not tapping into available resources, such as the school system, to make information available to families.[24] They also have the impression that various agencies that have conducted public outreach and other participatory processes probably do not share among them the data generated at the meetings, despite acknowledging improvements like simultaneous translation.

There is also a group of interviewees that, due to this historical distrust, questions the role of the BPDA, other public agencies, and private developers in leading community engagement processes that might result in substantive and long-term changes to the neighborhood. Representatives from grassroots organizations shared bad experiences from their participation in community meetings conducted in the past. For example, they recalled a moment when they felt their words were mistranslated by the interpreter at a meeting. When the interpreter refused to change his/her translation, trust in the process was broken. This was a real turning point in how they view community engagement processes. The same groups ask for a radical change in community engagement processes:

> *They [the agencies] need community organizers, not just community meetings… [they are] not trained in community outreach, not trained in equity, not trained in racial or language justice.*
> **East Boston community organizer**

Organizers, for their part, also expressed self-criticism about how communities engage in discussions about the future of their neighborhood. They mentioned that, in general, residents are not used to answering the question, "*what would you like to see in here* (sic)?". One organizer claimed that "*people do not feel entitled to imagine their neighborhood*."

Organizers also agreed on two limitations that impede the most marginalized communities from actively participating in consultations, exercising substantive influence in community engagement processes, or ideally spearheading community-driven planning. **The first limitation is division between communities in the neighborhood.** There are no organizations that represent all diverse groups in East Boston. A group of interviewees questioned the how representative neighborhood development corporations and other groups that enjoy a more fluid relationship with planning agencies are, claiming that they overrepresent white people, wealthier property owners, and that there is low representation of people of color, renters, and immigrants on their boards. They mention that, despite being closer to decision makers and engaging with developers for decades, they do not have the capacity to serve the community as a whole.

The second limitation to active engagement with participatory processes that groups and individuals cited was resource constraints. Most local

[24] As a sidenote, no interviewee mentioned a primary role of local schools in community life. Contacts to local public schools' authorities were made but not responded.

organizations are small or siloed by a focus on single issues like housing, environmental impacts, or immigration rights. As a result, they lack the time and capacity to engage in different processes or attend multiple meetings. They need to create niches to sustain themselves in a landscape where competitive funding options generally target narrower issues. This dynamic not only impedes attendance and engagement in community meetings but may also limit the broader conversation and obstruct solidarity between groups towards a common vision.[25] In line with this limitation, Latina organizers expressed the need for more involvement of Latino men in organizing and representing their communities.

4.1.1 East Boston communities and Massport

Most interviewees reported a complex relationship between the communities of East Boston and the Massachusetts Port Authority, or Massport, which is a self-funded independent public authority that operates airports and ports in the commonwealth. Massport's influence on neighborhood affairs is relevant: more than half of East Boston and a considerable part of the waterfront are owned, managed, and/or leased by them. The airport and its associated companies in the service industry are also among the main employers for East Boston residents.

While the Authority has implemented several strategies to mitigate their impact on the neighborhood and compensate for negative externalities from its operations, different organizations in East Boston and several interviewees hold Massport responsible for airport-derived pollution, severe traffic on the streets, and, in part, for accelerated gentrification due to short- and long-term property leases of land on the waterfront to developers. The majority also acknowledges that Massport, unlike other companies, seeks to engage with the community and takes specific actions to mitigate their environmental and societal impacts

Residents are grateful for the parks Massport has created and recognize that the agency gives back to the community.[26] In particular, they highlighted their support of the East Boston Foundation, an important funding source to small organizations supporting vulnerable populations. Representatives from these organizations declare that they have good and sometimes long-term relationships with Massport's community relations staff.

However, most interviewees think East Boston does not receive fair compensation for the burden of the airport and other impacts associated with Massport's operation. They mentioned that the neighborhood is disproportionately affected by pollution, mainly from air traffic but also because of road traffic to and from the airport. They seem unclear about the real impact of air traffic in East Boston, but it was mentioned that the smell of jet fuel is noticeable. Residents also complained about the possibility of a temporary lift of the existing parking freeze to build new parking spots

[25] Warren et al., 2021

[26] Among other mitigation efforts, Massport has spent over $170 million soundproofing over 11,000 residences and schools to mitigate the effects of aircraft noise. (link)

at Logan Airport,[27] and mentioned that Massport should not be allowed to do it until they can certify a reduction in the amount of emissions impacting the neighborhood.

Respondents mentioned that the current pandemic has shown how Massport's operations drive much of the neighborhood's traffic. They said that, compared to other economic activities, the airport has been slower to rebound, and that has been noticeable in East Boston's vehicle traffic. They wonder how much the air quality of the neighborhood has changed during these months, mentioning that research is ongoing to produce independent data on the matter.

A group of interviewees explicitly assigned Massport a share of responsibility for the housing crisis in East Boston. They claim that Massport is an important reason why high-end developments spread through the waterfront and that the Authority – as landowner and leaser – is greatly profiting from high-end residential development at the expense of the quality of life of East Boston's communities.

> *I'm critical of their development style…I think Massport has done as little as possible and certainly not focused on the health and wellbeing of the neighborhood...*
> **East Boston resident and political activist**

This group of interviewees thinks that the Authority's engagement and contribution to the community does little to mitigate the impact on people's health or their economic standing. They also mentioned that the State and the City of Boston should allocate a more significant portion of the revenue generated by Massport to the community. They argue that Massport has an incentive to keep participating in this type of waterfront development as long as more and more wealthy people move in and demand more high-end residential housing.

4.2 The second condition of Just Adaptation: adaptation framings should explicitly recognize the causes of systemic injustice.

The framework for just adaptation puts forth the idea that adaptation framing should explicitly address the root causes of injustice. In East Boston, as reported by the interviewees, the most pressing issues that keep the neighborhood from thriving are housing, education, job opportunities, and the situation of local businesses. This subsection explores these different challenges and tries to highlight how residents perceive they impact their quality of life/wellbeing.

> *Once a person or family is stabilized in housing, that is usually the beginning of them being able to move out of poverty. Housing competes with food, it's a horrible vicious cycle. Once you have a place to stay, you can focus on having your paperwork done, or getting some jobs, or owning your own business.*
> **East Boston community representative**

[27] East Boston parking freeze regulations are available on the City of Boston Department of Environment's Air Pollution Control Commission website. (link)

According to all interviewees, access to housing and long-term affordability are among East Boston's most pressing socio-economic problems. Lack of housing availability, limited pathways to ownership, and rent hikes are threatening the preservation of the neighborhood's diverse community. Organizers claim that the housing conditions under which many are living are dangerous; specifically, housing insecurity has been exacerbated by the pandemic, as people living in overcrowded spaces cannot isolate themselves properly. At the time of data collection for this report, East Boston had the highest COVID-19 positivity rate among the city's neighborhoods.[28]

Respondents are aware that the housing crisis is a state and nationwide problem but think that in East Boston it has been exacerbated by abundant high-end residential development built in the last 20 years, which is rapidly changing the character of the neighborhood and displacing the most vulnerable groups. In 2000, the average value of property in East Boston was $110,018. After a decade, in 2010, property values had tripled. In 2019, East Boston's median property value rose to close to $400,000.[29] The increase in real estate values is generally followed by landlords asking for higher rent, affecting low- and moderate-income families. East Boston renters have had their rents doubled in less than 15 years. In 2000, the monthly average rent was $670, then it went up to $1,032 in 2010, and in 2019 it averaged $1,489.[30] Residents perceive that residential development is not looking to the future of East Boston's young population, resulting in growing frustration as people realize that their children will not be able to afford to live there.

> *When they created this [waterfront development], they didn't say let's create a waterfront for East Boston that works for its working-class community...they wanted a Seaport, they wanted a Charlestown. It's not going to look like East Boston, it's not going to look like us.*
> **East Boston community organizer**

The general view seems to be that new developments have not brought economic prosperity to long-time residents. Investment in the Greenway and the Blue Line service helped the community, but also made the neighborhood more accessible and more desirable, accelerating high-end development. New areas were designed for newcomers and have created amenities that do not encourage them to leave their buildings and integrate into the community. One resident pointed out striking differences between long-time neighbors and newcomers with the example of open-air music concerts:

> *Zumix[31] makes concerts every Sunday in summer, and it creates community. You meet your neighbors, you see everybody. Now they have bands in the new place on Thursdays and it's all this demographic that has never lived here and doesn't care about engaging anybody from here. It's*

[28] Boston Public Health Commission Covid-19 Report: Week of September 17, 2020 report (link)
[29] U.S. Decennial Census 2000: Home Values, 2003; ACS 5-year PUMS, 2010; ACS 5-year PUMS, 2019
[30] ACS 5-year PUMS, 2019
[31] Zumix is an East Boston non-profit organization dedicated to building community through music and creative technology. (link)

very odd. There needs to be more of an effort. They are not bad people, but there should be a way to integrate them more with the community.
East Boston resident

A couple of respondents also questioned the idea that more residential development is helping to increase the stock of affordable housing in East Boston and alleviating systemic poverty. Interviewees representing community-based organizations questioned whether affordable units created through the Inclusionary Development Policy (IDP)[32] – from high-end residential developments built in East Boston – are helping to solve the housing problem or actually displacing more people. The IDP program mandates developers to designate a small portion of new housing projects as affordable units. In general, these units are required to be affordable to households at or below 70% Area Median Income (AMI) for renters or between 80% AMI to 100% AMI for homebuyers. The AMI is the median of a region's income distribution,[33] and it is calculated on an annual basis by the U.S. Department of Housing and Urban Development (HUD).[34]

However, the IDP program has been criticized due to excessive flexibility for developers and lack of opportunities for low- and moderate-income households.[35] The BPDA offers housing opportunities to renters with incomes up to 70% AMI and homebuyers with 100% AMI. For example, a family of four with a hypothetical annual income of $120,000 would qualify for buying an affordable unit of 100% AMI,[36] whereas a family of four with an annual income of $84,000 qualifies for renting an affordable unit of 70% AMI. The median household income in East Boston in 2019 was $60,510 and 58% of households were families with two or more members,[37] meaning that families from the neighborhood are likely to be outpriced by buyers from other areas of the city. The path to rent affordability and ownership may be even more difficult for uniparental families. East Boston is above the city and the state's averages for homes composed of "Female householders without a husband present".[38] While 17.4% of East Boston families live below the poverty line, that increases to 38.4% in families where the householder is female.[39]

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[32] According to the BPDA website "The Inclusionary Development Policy (the IDP), first created in 2000, requires that market-rate housing developments with ten or more units and in need of zoning relief support the creation of income restricted housing through inclusion of income restricted units within their building (typically 13% of a development's units); creation of income restricted units at a location near their building; and or contributing to the Inclusionary Development Policy Fund. These funds are used by the City of Boston Department of Neighborhood Development (DND) to fund the creation of affordable/income restricted housing across Boston. (link)

[33] It is important to note that HUD defines the Boston AMI as stretching from the border with the state of New Hampshire to the north and Weston and similarly wealthy suburbs to the west. The use of AMI instead of Boston Median Income masks the relatively lower median incomes in the city and in neighborhoods such as East Boston.

[34] For a comprehensive explanation of the AMI calculation, please visit (link) and (link)

[35] See Coalition for a Truly Affordable Boston (link) and Boston Tenant Coalition (link)

[36] BPDA Inclusionary Development Policy; 2020 Income Limits, Maximum Sales Prices & Maximum Affordable Rents based on Area Median Income (link)

[37] ACS 5-year PUMS, 2020; BPDA Research Division - Boston in Context: Neighborhoods, 2021 (link)

[38] ACS 5-year PUMS, 2019

[39] ACS 5-year PUMS, 2018

Solutions proposed by interviewees are enacting a temporary moratorium on more high-end residential development on the waterfront,[40] building more family units instead of small units, and promoting pathways to ownership. They express that the city should explore rent-to-own or equity buildings, with the understanding that people need to have the opportunity to own if they want to leave the circle of poverty. They hope for climate resilience strategies in the neighborhood that take the housing crisis into account, and not to worsen it by promoting the type of residential development that is rapidly changing the face of East Boston, making it unaffordable for low-income families.

4.2.1 Education issues

The engine of Boston are the immigrants who have lived here for generations, including my ancestors from Ireland… those same people are the drivers of the East Boston economy.
Long-time East Boston resident

Residents mentioned that, historically, immigrant communities in East Boston have been eager to thrive and provide opportunities for their children. They hope for the state and the city to invest in young people and retain them, instead of attracting talent from other US cities and ultimately displacing locals. They express that young people growing up in the neighborhood should benefit from the region's unique educational opportunities. Among those aged 3+ and enrolled in educational institutions, East Boston shows a similar share of the population attending primary education compared to other neighborhoods, but only 16% is enrolled in higher education, the lowest proportion in Boston and not even half of the average in the city.[41]

In general, interviewees did not highlight the quality of local schools as a cause for lower access to college. However, representatives from marginalized communities mentioned that they are noticing a disparity in school quality, claiming that charter schools now provide better opportunities for students to perform well and access college in the future. The distance to higher education centers and the absence of universities in East Boston were mentioned as disadvantages but not considered significant barriers for youth to enroll in higher education.

The main barrier seems to be affordability: the high cost of tuition and the opportunity costs attached to pursuing higher education. The average annual cost of tuition, books, and supplies to attend a 4-year college in Boston exceeds $72,000.[42] For many immigrant families, paying for education is just not possible. According to one resident, "*people work to feed their family here and also to feed family back home*," which illustrates a burden that may be even heavier on households with fewer economically active members.

The upward social mobility associated with attending college may not be within the reach and aspirations of the average East Boston youngster. In 2019, only one-fifth

[40] Originally proposed in 2018 (link)
[41] ACS 5-year PUMS, 2019
[42] National Center for Education Statistics, U.S. Department of Education Academic Year 2020-2021, retrieved from collegetuitioncompare.com (link)

of the population of East Boston had completed a college degree from a 4-year higher education institution, a graduate or professional degree.[43] This means, the knowledge economy that has powered Boston in recent decades may not have benefitted East Boston families in the same way as it has in other neighborhoods. Compared to other neighborhoods, East Boston has the second-lowest percentage of people working in computer, engineering, and science jobs, in addition to the lowest share of employment in education, legal, community service, arts, and media occupations in the city.[44] A share of East Boston's first generation-born youth may not have a reference to promote the advantages of pursuing higher education, as those opportunities may not have been available to the generation that arrived as immigrants.

Residents mentioned that they would welcome more educational opportunities or university campuses as long as they benefit the community, respect their cultural identity, and do not become agents of gentrification and displacement. To explain this cautious endorsement, one interviewee mentioned the case of a university located elsewhere in the city that removed a soccer field and replaced it with an off-campus baseball diamond for their students, an action seen as insensitive to the culture and the needs of the neighborhood where the soccer field was originally located.

When consulted about access to training in trades – as an alternative to college – interviewees mentioned that it is not usual for youth to follow that path. Data from the Massachusetts' Board of Elementary and Secondary Education (BESE) demonstrate an "awareness gap" where 37% of students of color vs. 58% of non-Latino white students; 5% of English learners vs. 89% of non-English learners; and 18% of students for whom English is not their first language vs. 78% for whom English is a first language are likely to apply to Career/Vocational Technical Education (CVTE) schools and programs. When these student subpopulations apply, only 60% of students of color vs. 73% of white students; 51% of English learners vs. 69% of non-English learners; and 57% of students whose first language is not English vs. 71% for whom English is a first language are admitted to a CVTE program.[45] One resident claimed that, as Latinos, they do not feel welcome in trades that provide well-paid, unionized jobs, so those opportunities are rarely incentivized to youngsters. Further, there are no vocational-technical schools teaching trades in East Boston.

In addition to the problems accessing higher education and better employment opportunities, organizers from the Latino community mentioned that those who were born outside the US find that the skills they possess are not demanded in Boston, leaving them with few alternatives but to work in lower paid jobs like janitorial, security, and other positions in the service industry. Representatives from maritime companies expressed interest and the will to cooperate toward more training for residents in jobs related to their trade, which would provide residents with working opportunities that depend on a resilient waterfront. However, it is uncertain how feasible it would be to incorporate these types of contents in the curricula of any of the existent schools.

[43] ACS 5-year PUMS, 2019
[44] ACS 5-year PUMS, 2019
[45] Massachusetts' Board of Elementary and Secondary Education, Career Vocational Technical Education Waitlist Report for 2020-2021 (link)

4.3 Employment opportunities

East Boston residents have one of the highest participation rates in the labor force in the city.[46] The nature of occupations is what varies the most. Most interviewees were confident that the majority of East Boston residents work in the services industry in Downtown, Beacon Hill, the Seaport District, and other areas of the Greater Boston region. In line with this assumption, data that shows that 87% of East Boston residents who are employed work in protective services, food preparation, building cleaning, and other service occupations, which is by far the largest proportion among neighborhoods in the city.[47] These types of jobs are among the most likely to be disrupted by climate disasters and the least likely to be able to do remotely during a storm. This challenge was seen clearly with the Covid-19 pandemic.

A significant number of East Boston residents work at the airport and its affiliated services. Another source for local jobs is the East Boston Neighborhood Health Center (EBNHC), which enjoys a reputation as a good employer where people can provide for their families and make a career. The rest of the economically active population work at local companies, shops, and restaurants, which are known for preferentially hiring local residents, or as business owners. Among those working in the maritime industry, Channel Fish was mentioned as a company that employs residents and engages the community.

In terms of economic opportunities, probably the most affected residents are undocumented immigrants and their families. They regularly work in informal and low-paid jobs and are not eligible for unemployment, housing, or nutrition support. According to official data, approximately 35% of East Boston's population does not have U.S. citizenship,[48]. This is by far the highest percentage in Boston, but organizers suggest that this proportion might be even higher. They note the current overcrowded conditions and immigrants' fears of being detained and deported if they interact with public institutions, like hospitals or the census. As one neighbor mentioned:

> "*They [the authorities] want this population to be counted for the census, but in return they don't qualify for basically nothing. Even though they've been paying taxes and other obligations. It's taxation without representation*".
> **East Boston representative**

Neighbors point out that they can remember decades of conversations about how to bring more economic opportunities to East Boston. In the opinion of one local organizer, the silver bullet has been assigned at different times to a casino, an Amazon distribution center, high-end residential development, and recently to the development of the Suffolk Downs area. For most interviewees, endogenous economic development through local business is the best strategy towards a vibrant economy that also

[46] ACS 5-year PUMS, 2020; BPDA, 2021
[47] ACS 5-year PUMS, 2020
[48] ACS 5-year PUMS, 2020

supports the most marginalized community members, including undocumented and non-English speaking neighbors.

4.3.1 Opportunities for small businesses

All interviewees expressed positive views about East Boston's local shops and restaurants, characterizing them as authentic, resilient, and thriving despite the pandemic. Small businesses power a cycle of endogenous economic development: the main customers during weekdays are the same people who work at hair salons, grocery stores, offices, or the EBNHC. During weekends and holidays, people from other neighborhoods come to them to shop and eat.

Despite their success, representatives and customers of the Main Streets business district located along the axis of Maverick Square and Central Square (see image 6) mentioned long-lasting problems, some of them associated with urban design. The most pressing ones are excessive vehicle traffic, the need for more parking, uninviting walkable space, little demand from new residents, and lack of access to the waterfront. Small businesses are also extremely vulnerable to climate disasters and often are unable to re-open after a climate event.

Image 8: East Boston Business District
Source: Boston Research Maps (2020)

These issues are not new. In 2011, the East Boston Main Streets[49] (EBMS) and the Department of Urban Studies and Planning at MIT produced the report *A Revitalization Plan for East Boston Main Streets*,[50] which pointed out that, by that time, business owners had already expressed concerns about traffic that impedes the business of more customers, in addition to the limited availability of parking, particularly along the Maverick Square and Central Square axis.

Causes for the traffic situation are multifold, but most respondents point to Massport as responsible due to increased vehicle traffic to and from the airport that passes through East Boston, particularly by app-based shared rides. Massport, as mentioned in the previous section, acknowledges the problems that traffic to Logan Airport causes in the neighborhood's streets and has been implementing an aggressive plan to incentivize public transport alongside negotiations with ride sharing platforms to reduce the transit through East Boston streets.

Although the EBMS-MIT report concluded that there was a reasonable amount of parking available, also suggesting that more parking could impede a more open and walkable environment, residents still complain that the parking problem is critical and that similar situations have been solved in other areas of the city by building public parking garages close to T stations. Considering that Blue Line ridership has increased together with new residential developments, they wonder why parking solutions have not been implemented for East Boston.

In terms of walkable space within the business district, and despite a strong retail atmosphere and the redevelopment of certain spaces, some areas are still perceived as underused and uninviting. The EBMS-MIT report noted that businesses that do not rely on foot traffic, such as dentists, medical facilities, and tax services are using ground floor commercial storefront spaces that could be better utilized by restaurants or other small business that would benefit from street access, as a means to create a more connected commercial environment.

This strategy would also help solve the problem of limited space for business expansion in the district. A low commercial vacancy rate still limits opportunities for new businesses to locate and expand in East Boston. Respondents mentioned that low vacancy exists because rent is affordable compared to other areas in Boston, but that more retail space is needed in the business district, in Liberty Plaza, and hopefully on the waterfront.

Interviewees closer to the Latino community agreed. They would like to have access to retail space and see more open markets, vending carts, or similar ventures that enrich their culture. They aim for street food options to be available and encouraged, so the community can embrace the culture of the community members

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[49] East Boston Main Streets (EBMS) is a public-private partnership initiative of Boston Main Streets. The program has been operating in East Boston since 1995. EBMS assists local businesses by providing funding, technical assistance, façade improvements, and community events coordination. (link)

[50] EBMS-MIT: *A place to start, a place to stay: a revitalization plan for East Boston Main Streets,* 2011 (link)

from Puerto Rico, Colombia, or El Salvador. The EBMS-MIT report identified support from business owners for push carts and asserts that, more than competing, the activity would complement East Boston's restaurant industry.

Residents and business representatives claim that high-end residential development has not brought more customers to local businesses. One group said they try to engage the new neighbors with local business, but it has proved difficult because they come from a different background and are mainly commuters, so it may be easier for them to eat outside East Boston than locally. Moreover, convenience stores and restaurants are opening in newly developed areas and capturing the market of traditional small businesses. Consulted about this dynamic, one organizer claimed that "*new residents are getting their own shops*."

Most interviewed residents pointed out that equitable development should acknowledge that small businesses serve the community and bring prosperity to the neighborhood as the engine of commerce. New waterfront development should not favor chains or bring high-end shops targeted exclusively to newcomers, or they may push local shops out of the market.

In essence, the disadvantages described by the interviewees makes it urgent to incorporate the need for safe and healthy housing, a higher rate of educational attainment, and more flexible job opportunities into a comprehensive strategy to avoid putting people at risk of climate impacts. Section 5 will provide recommendations for these issues to be at the center of future climate resilience policies and plans affecting the neighborhood.

1.3 Third condition of Just Adaptation: incremental evaluations of implementation to avoid timeframes inconsistent with advancing justice

What's left of the waterfront should not be continued to be turn[ed] into condos for rich people. It would make the waterfront more interesting, more vibrant, more beautiful, and bring economic activity as well.
Long-time East Boston resident

According to respondents, the general perception of residents is that East Boston deserves a resilient and functional waterfront, but also that the outcome should be grounded in equity principles and help alleviate the most pressing problems of the neighborhood. Among the diversity of visions for the waterfront, recurring elements were accessibility; respect for the natural landscape and the environment; climate resiliency; availability of green spaces to enjoy the views and fresh air; for it to be mixed-income and family-based; and the inclusion of amenities and resources to provide economic opportunity and support local businesses. A majority opinion was that most of those characteristics are yet to be achieved and that a different strategy is necessary for the East Boston waterfront to become a source of pride and dignity for the community.

Just a couple of decades ago, the post-industrial appearance of the East Boston waterfront looked quite different from what it is now. Memories of abandoned, polluted,

and uninviting areas of the waterfront facing Boston Harbor are still vivid for older residents. This is reflected in accounts and planning efforts of the time. A report from 1997 that interviewed several residents and produced development alternatives for an abandoned industrial complex on the waterfront described vacant waterfront areas as inaccessible, contaminated, and outmoded.[51]

The 2000 East Boston Master Plan acknowledged the need for development and to "*[p]rovide full utilization of the East Boston Harbor waterfront*…" (p.10), suggesting open, green areas and a harbor walk throughout the waterfront, including a new ferry terminal in Liberty Plaza. The plan explicitly called for new waterfront housing and rehabilitation of older housing stock, highlighting that "*East Boston is a residential community and housing is likely to remain as the area's most significant component*" (p.19).

Following the completion of the East Boston Master Plan, the 2002 East Boston Municipal Harbor Plan (MHP) oversaw the implementation of the plan's goals for the waterfront. The primary objectives stated by the MHP were to provide the public with meaningful access to the waterfront; preserve and strengthen the working port; enhance the East Boston community; and ensure that the waterfront serves as a positive economic force for East Boston's and the city's economy.

Despite the high expectations of those planning efforts, most interviewed residents suggested that waterfront development has not achieved those goals and that there is no outline of what is to be built close to the shoreline, nor behind and around it. A long-time resident labeled the result as a '*hodgepodge'* of developments. When asked about the origins of this situation, most informants held the planning and zoning agencies responsible for conceding permits and discretionary power to developers about what and how to build there. The perception of East Boston residents is that, in the last 20 years, the character of the neighborhood has radically changed, and that problems like worsening housing conditions and displacement are the result of unplanned development.

4.4 Residents' hopes for a Central Square waterfront

> *The waterfront is among East Boston's greatest assets, but many sections of the waterfront are inaccessible and underutilized. Programmatic and physical interventions—particularly at Central Square and Liberty Plaza—are needed to make the waterfront more inviting and encourage activity there.*
> **EBMS-MIT Study: Plan for Physical Revitalization (2011), p.58.**

As described in Box 1, nearly all interviewed residents shared a desire for the community and small businesses to gain access to the Central Square waterfront. There are many reasons they value the site and would like increased access. Among these are the potential for increased connectivity with Boston, the landscape and the

[51] Fernandes, DJ. 1997. *Catalytic development on the East Boston waterfront: analysis of development opportunities for the former Deran Candy Factory*. Master Thesis, Massachusetts Institute of Technology, Cambridge, MA. (link)

view of stunning sunsets. These changes would increase tourism possibilities and opportunities for the business district. To make this area more vibrant, they recognize a real need for more open and walkable space along Maverick Square and Central Square; and the importance of addressing the fact that the area is in the floodplain.

Most respondents would like to see a Central Square waterfront that is resilient and integrates a diversity of small businesses, hopefully from owners who live in East Boston and are part of the local economy. They appreciate the examples of Portland, Maine or Newport, Rhode Island as cases where the waterfront has managed to preserve small businesses that are owned by and employ members of the community.

Some residents stated that access to the waterfront should have been a key part of the discussion prior to the redesign of Central Square, which was completed in 2017. The remodeled Central Square narrowed streets, widened sidewalks, and expanded green areas, and now hosts the weekly farmers market organized by the EBNHC. Most interviewees seem satisfied with the redevelopment, although some respondents criticized the project's community engagement process.

Liberty Plaza, the strip mall lying between Central Square and the waterfront, generates harsher critiques from the community, with numerous complaints about the character of the site. Residents claim that it blocks the waterfront, are not satisfied with its design and the space dedicated to its parking lot, and complain about the fact that it hosts almost exclusively chain stores:

> *It feels weird, it's like having a suburban strip mall in the middle of an urban neighborhood.*
> **East Boston Latina organizer**

The EBMS-MIT report concluded that the waterfront behind Liberty Plaza was *poorly marked, physically isolated, and reputed for undesirable uses* (p. 59). It also noted that regular visitors to the district do not know that this section of the waterfront is publicly accessible and that is perceived by residents as uninviting and unsafe.

As potential solutions to this situation, some respondents stated that a more vibrant neighborhood could be achieved by having the strip mall face the waterfront; renting more space to local shops; and/or relocating the parking in Liberty Plaza to a public parking garage. In line with the 2000 East Boston Master Plan, several respondents suggested the need for a dock in the Central Square area, which would improve maritime connectivity and help tourists walk around and patronize local businesses and cafes. A dock in Central Square could be the starting or ending point of a circuit that extends to a proposed new ferry dock at Lewis Mall.[52] This circuit would create a new touristic destination in Boston, where visitors could arrive either at Lewis Mall or Central Square, walk around shops and eat at restaurants, and later return by ferry using the dock at the other end of the circuit.

[52] *New Ferry Dock in East Boston at Lewis Mall will support future water shuttle connections.* Boston City Paper (21 February 2020) (link)

5. Discussion and recommendations

There has always been an interest for [decision makers to support] those who already have [power], and I think now there is an opportunity for the city and the state and companies to shift from that model, and ask themselves: what is [it] that the community really needs at this time?

East Boston representative

East Boston residents are aware of the consequences that a changing climate can cause in their neighborhood. They feel that summers are getting hotter and storms are getting stronger; they experienced the storm surge that went through multiple high tide cycles in 2018; and they pay attention to the flooding projections for the coming decades. They understand that bold and resolute action is needed as soon as possible, but for them it is also important to know that their community, and particularly the next generation, will have the chance to live in their neighborhood and look with pride at the results of their actions.

In terms of urgency to act, almost no respondent placed the threat of climate change over the housing crisis and other socioeconomic problems affecting East Boston. The risk of being displaced, life in overcrowded spaces that exposed entire families to COVID-19, and high rents that make them depend on government support and charity to access food, are impacting residents' sense of human dignity.

In line with the claim that just adaptation demands full participation of marginalized populations and the agency to shape decisions affecting them, the general perception from respondents is that the large majority wants to engage and find common solutions to solve the problems of their neighborhood. Divisions within and across communities are visible, but almost all interviewees expressed respect for opposite views and openness to discussion.

However, rapid change in the character of the neighborhood and some bad experiences with community engagement meetings in recent years have eroded trust in these processes, regardless of the proposals. As a result, increased participation and, therefore, an equitable resilience strategy may be impacted by the barriers noted in this study. These barriers include resource constraints that small organizations face to attend community meetings, language and communication challenges, different views about highly influential actors like Massport, and the lack of consensus among stakeholders about the acceptability of the status quo.

In parallel to addressing these barriers to participation, an agenda to generate a common vision and equitable resilience strategies for East Boston should discuss to what extent current efforts have favored certain privileged groups while simultaneously denying resources (like access to the waterfront) to marginalized communities. Climate resilience strategies that perpetuate this situation are known as *acts of omission*[55], prioritizing interventions that protect economically valuable areas over low-income or

minority neighborhoods. These types of strategies represent the unequal allocation of scarce resources and the creation of amenities and ecological enclaves for privileged groups that may exclude the poor from climate protection and other resources. As a result, they assume that low-income communities, particularly low-income people of color, and their socioecological systems are expendable. The truth is the opposite: they are indispensable to keep the system working, particularly during and after extreme climate events or shocks like the Covid-19 pandemic. This is in line with the residents' repeated comments about their communities being the "engine" of Boston's economic prosperity. They see themselves as serving a thriving economy; however, at the same time, respondents cite a need for a stronger local economy that would first serve the people of the neighborhood. Furthermore, in East Boston the impacts of the COVID-19 pandemic reveal that indispensability and expendability can coexist, because the majority of residents who work in the service industry and their families are disproportionately exposed to the virus and its consequences, risking loss of income or unemployment if they fail to keep businesses functioning across the harbor.

On the other hand, there are climate resilience strategies that may fall on *acts of commission*[56], which are typically infrastructure investments, land use regulations, or the establishment of protected areas that disproportionately affect or displace disadvantaged groups. Gray and green infrastructure, canals, or green belts may turn into examples of acts of commission. There, resilience actions directly displace low-income communities, either immediately or eventually, through climate gentrification[53]. As it is happening in East Boston, the neighborhood becomes increasingly expensive, and low-income families get displaced. As a result, they resettle in places that tend to be far from work opportunities, disconnected from social networks, and continue to be affected by disaster risks, thereby reducing communities' adaptive capacity and long-term security.

The following recommendations aim to advance an equitable strategy for climate that prevents acts of omission and commission by reconciling the responses to the climate crisis with the certain and measurable impacts of systemic injustice.

When reviewing de-designation, prioritize the vision East Boston residents have for access to the waterfront for community members and small businesses, particularly in the DPA parcel near the Central Square area.

Residents have expressed concern about the de-designation of the East Boston DPAs as a way to build more high-end housing. While the request from the Boston Planning & Development Agency to the Massachusetts Office of Coastal Zone Management dated January 30, 2020, acknowledges residents' preferences for more housing and open spaces in the underutilized waterfront areas, interviewees feared that

[53] Anguelovski, 2019; Shorky et al., 2020

the de-designation will attract more high-end housing development and aggravate the displacement already happening in the neighborhood.

Long-time residents share a desire for the community and small businesses to gain access to the Central Square waterfront. There are many reasons they value the site and would like increased access. Among these are the potential for increased connectivity with Boston (possibly with a dock), the landscape, and the view of stunning sunsets. They appreciate that there are examples of other cities like Portland, Maine, and Newport, Rhode Island, where the waterfront has managed to preserve small businesses that are owned by and employ members of the community. These changes would increase tourism possibilities and opportunities for the Central Square business district.

Officials and proponents explaining complex ideas that will impact communities should be bilingual and able to engage in discussions in the native language of the majority of their audience.

Respondents representing Latino communities highlighted language barriers as a key problem. Specifically, native Spanish speakers cannot fully understand and therefore adequately respond to messages from planners and developers. This results in a biased exchange of information. Residents report that they receive complex ideas in English, a language in which they may not be fully dominant, and simplified information in their native language. While grateful for efforts that have been implemented in recent years (e.g., simultaneous interpretation and translation of documents), the complexity and length of the messages, in addition to problems with translation services, result in the perception that they are in a disadvantaged position compared to other groups and do not enjoy a full seat at the table.

East Boston is a good place to implement such a standard: compared to 28% of Boston residents, approximately 50% of East Boston's population is foreign born.[54] From that share, close to 80% was born either in Mexico or Central or South America.[55] Residents identifying themselves as Hispanic account for 57% of East Boston, significantly higher than the 19% of Boston residents identifying as Hispanic.[56]

This recommendation might be hard to achieve for small municipalities or institutions with limited resources but should not be the case for large institutions with highly skilled workforces, like the State of Massachusetts or the City of Boston. If language justice is to be pursued, more than being mandated, planning officials' proficiency in Spanish and other languages needs to be rewarded by their employers. It is desirable but sometimes not possible for the head of a project to speak another language, but at least one senior official from the team should be fluent in the language

[54] ACS 5-year PUMS, 2018
[55] ACS 5-year PUMS, 2019
[56] ACS 5-year PUMS, 2018

of the community and be accountable to them. Translators' proficiency should not have a detrimental impact on community engagement processes to the extent that respondents reported.

To improve its relationship with the community, Massport should address the claims about their business model and political influence through a transparent community process with the assistance of independent facilitation.

Though East Boston is far from an American version of a *Monotown*,[57] it is clear that Massport holds a disproportionate influence on the community's social and economic life compared to other companies or public institutions. This includes but is not limited to a role in the health status of the population. There is already a marked division between views about Massport's effort to mitigate the impacts it has on East Boston, how much it gives back to the community, and how it engages with community groups. Another issue that could lead to future conflict – and decreased engagement – is the perception of Massport's role in the gentrification of the community. Several respondents linked Massport with high-end residential developers as entities influencing planning agencies and decision makers, ultimately enabling the rapid change the neighborhood is experiencing.

> *"The relationship they have with the state is wrong. They are private when they want to be private, they are public when they want to get with their way."*
> **Long-time East Boston resident**

The community understands that the airport will remain where it is now, and that the Authority will continue its operations in the area for the years to come. Considering that mitigation and compensation actions (as outlined in section 4.1.1) will still be required, some questions that arise are: What would a vision of Massport as a trusted partner to most of East Boston's communities look like? Should the Authority keep directly engaging with the community and propose their mitigation and compensation actions? Or should those be envisioned and demanded by the community alongside their elected officials?

As suggested by several respondents, Massport should go beyond helping to address current problems and invest in the future for those who are more marginalized. One way to do that is to promote economic opportunity attached to access to the waterfront. Residents mentioned that they would appreciate having fish stands or taco stores on the waterfront that employ local people, also providing opportunities to those with irregular immigration status. They claim that Massport may be the only entity with the power to build space for local business on the waterfront and restrict multi-ownership. Another proposal is for the Authority to get more involved in solutions addressing the lack of opportunity that many students are facing. Massport could use a

[57] A Monotown is a city or town whose economy is dominated by a single industry or company; a term mostly used in the Russian context.

portion of revenues earned in East Boston to support scholarships for students. This would contribute to levelling the playing field by helping first-generation students support their families and break the vicious cycle that funnels them into insecure, low-paying jobs in the service industry.

Planning agencies and/or organized community groups should encourage the use of neutral professional mediators to help manage community engagement, build trust, and support the generation of a common vision for equitable climate resilience, so that planning agencies are not in the double role of regulator and facilitator. Those neutral mediators – funded but not necessarily hired by planning agencies or developers – could be chosen by community groups in agreement with a project proponent and/or other stakeholders, alongside the approval of the planning agencies.

The severity of the problems affecting East Boston communities do not seem to be shared by all groups, at least not with the same intensity. While several interviewees claim that gentrification and lack of economic opportunities are reaching a tipping point, this same urgency was not heard from planning authorities and organizations with more resources. If the latter are leading processes to engage the former and to jointly develop creative solutions to address these multiple problems, then they should agree about whether the current situation is acceptable or not. The ongoing process that may lead to the removal of certain parcels from the East Boston DPA shows this stark difference. Only a handful of respondents seemed to be aware that the BPDA requested a review of the DPA boundaries or understood the associated potential changes. However, even without fully grasping the extent of the process, most interviewees opposed any changes that could open the door to more high-end residential development on the waterfront, even when climate resilience benefits were prompted.

> *The DPA review is still focused on money. If they are making money in industry then great, it stays. If it isn't, they are willing to make it housing. I feel that is frustrating. There is room for the DPA's to be adjusted and housing to be buil[t]… [but] city planners and developers lack that creativity.*
> **East Boston representative**

Those more informed about the process advocated for the development of a common vision through meaningful engagement with the neighborhood before more zoning changes are implemented. On the other hand, a minority of respondents hoped for faster paced and immediate climate action on the waterfront, respecting communities' visions as much as possible. This divide suggests that a closer look is needed to understand the perceived importance of climate resilience compared to other historical issues that reinforce systemic injustice in the neighborhood, or an approach to climate resilience that also addresses systemic injustices (more in the following section).

The distance that exists between planning agencies and larger organizations and groups representing Latino communities in their views about the need for more high-end housing development on the waterfront – even for climate resilience purposes – suggests that parties do not agree whether the status quo is acceptable. This may lead to increased disengagement from certain groups and reduced participation in community engagement processes.

Mediators may contribute to ensuring that discussions about the problems and the urgency perceived by the community are effective, data is shared and understood by all sides, and commitments are made. Neutral mediators could also help parties generate new ideas and consensuses. The effectiveness of such an endeavor would rely on perceptions of their impartiality, meaning that a good first impression may lead to increased trust in participatory planning and other processes requiring community engagement.

Throughout these processes, local anchor institutions[58] like the EBNHC can either play the role of accompanying the external mediators and/or providing a neutral venue for discussions to happen. The local health center provides curative and preventive medicine regardless of the patient's immigration status; serves and employs residents; brings the benefits of Boston's thriving health economy to the neighborhood; and engages with the community through different channels. It was regarded with trust and gratitude by most interviewees, a feeling that has been reinforced by their central role in providing support and free testing during the COVID-19 pandemic.

Decreasing trust in public institutions may also reinforce the barriers for future planning efforts. The same interviewees that emphasize profound social and economic change as a solution for East Boston's problems are increasingly hesitant to engage in processes led by the state or city officials. Residents can see the possibility of positive changes resulting from agencies' outreach strategies, but are wary based on previous experiences; specifically, they fear another display of a *gatopardism* strategy: to make changes only for things to remain the same.

In addition to the idea of neutral mediation, a complementary proposal mentioned by a group of interviewees is that agencies should hire community organizers from East Boston and pay them for their time, instead of deploying their own staff to do community engagement.

While respondents did not criticize current staff working for planning agencies, they pointed out that the people doing outreach are not organizers and do not claim to be. The planning staff are not trained in effective outreach and do not have the lived experience to understand what communities are going through.

[58] Anchor Institutions are place-based institutions anchored within their communities, increasingly recognized as key contributors to urban and community development.

It may not be easy for institutions who have traditionally managed community engagement processes to accept independent mediation or to hire community organizers to generate a common vision on issues that are key for the neighborhood's future. The questions are, therefore, what is needed for them to consider this option? What are alternative ways to rebuild trust between communities and planning authorities? And, most importantly, what are policies and policy instruments that, grounded in participation and equity principles, can simultaneously address issues like the climate crisis and systemic injustice?

The need for more incremental evaluation of planning objectives and development projects

Formally – if planning for development and permitting processes are considered – it is fair to say that high-end waterfront development has been occurring for more than two decades. However, residents claim to have felt most changes only in the last ten years, when East Boston started to rapidly lose its working-class character and neighbors began to feel uncomfortable or even unwelcomed and discriminated against in certain areas of the waterfront. This situation points out a need for more attention to the principle of Just Adaptation that calls for incremental evaluation of planning implementation.

Most interviewees feel dissatisfied with how waterfront development has transformed East Boston into a residential hotspot. The growing anxiety of vulnerable families displaced from their own neighborhood due to the rising cost of housing exposes the problems of long evaluation timeframes for being inconsistent with advancing justice.

The objectives for waterfront development in the 2000 East Boston Master Plan and the 2002 East Boston Municipal Harbor Plan might have been accomplished, according to conventional metrics; however, unintended consequences of that policy now raise questions that resonate with calls for early, regular, and community participatory evaluation of the implementation of the plan's objectives. What would have happened if the plans had explicitly required more incremental evaluations for the implementation of the proposed visions? In other words, how long should communities wait to identify whether the implementation of planning objectives for climate resilience are causing unintended consequences that harm the quality of life of some or all residents?

Establishing a permanent committee composed of officials, residents, and other relevant actors that – perhaps with the support of a university or other partner institution – is in charge of monitoring multidimensional indicators that can shed light on changing trends and better diagnose the state of community resilience in the neighborhood.

Among other frameworks to assess these outcomes, indicators that may be worth exploring and adapting to the reality of East Boston are the Community Resilience Indicators developed by Cutter et al. (2008),[59] based on determinants of resilience developed by several scholars.[60] These indicators introduce six different dimensions composed by several variables grounded in theory and amenable to quantification (see Table 1) that – according to their state of deficit or achievement – link the concepts of vulnerability and resilience and can be readily applied to address real problems in real places.

Table 1: Community Resilience Indicators

Dimension	Candidate Variables
Ecological	Wetlands' acreage and loss Erosion rates % Impervious surface Biodiversity # Coastal defense structures
Social	Demographics (age, race, class, gender, occupation) Social networks and social embeddedness Community values-cohesion Faith-based organizations
Economic	Employment Value of property Wealth generation Municipal finance/revenues
Institutional	Participation in hazard reduction programs (NFIP, StormReady) Hazard mitigation plans Emergency services Zoning and building standards Emergency response plans Interoperable communications Continuity of operations plans
Infrastructural	Lifelines and critical infrastructure Transportation network Residential housing stock and age Commercial and manufacturing establishments
Community Competence	Local understanding of risk Counseling services Absence of psychopathologies (alcohol, drug, spousal abuse)

[59] Cutter et al., 2008
[60] See Adger et al., 2005; Brenkert and Malone, 2005; Folke, 2006; Heinz, 2002; Paton and Johnston, 2006

	Health and wellness (low rates of mental illness, stress-related outcomes) Quality of life (high satisfaction)

Source: Cutter et al., 2008, p.604.

Continuous and participatory monitoring of variables like value of property, residential housing stock and age, demographics, participation in hazard reduction programs, in addition to those related to health and quality of life, may help communities and planners understand not only the degree of fulfillment of planning objectives, but also how intended and unintended consequences emerge as a result of that accomplishment. Some variables, like municipal finances, may not be relevant to monitoring resilience in a setting like East Boston; therefore, the process to select and validate variables should be an exercise that takes place in advance of their eventual adoption.

In a plan that focuses on equitable resilience, planning agencies and development proponents should be required to support major projects with clearly spelled out short, intermediate, and long-term objectives. Incremental and participatory evaluations may be useful not only to provide early warnings about unintended consequences of planning objectives and development, but also to enhance trust between those producing and receiving information. This will facilitate the transition between knowledge and action to protect the neighborhood from the impacts of climate change.

6. Conclusion

Today, despite the looming threat that climate change poses for East Boston, climate resilience as a singular issue gets diluted by ongoing problems affecting the neighborhood. A major risk revealed by this report is that efforts toward climate resilience become known as a source of gentrification and displacement, subsequently losing support from the community. The question that arises is how to anticipate a rapid loss of trust in community engagement processes in East Boston and in general. The partial answer this report provides is to make sure that climate resilience measures will be equitable and that the concept will not be used merely as a buzzword, but as a means to address existing and postponed problems that communities face.

In this report, we identified some initial steps that planning agencies and developers can take to respond to this challenge. First, we suggest a radical transformation of what is today understood as adequate community participation, integrating place-based organizations in the process to identify residents' most pressing issues, their fears, and the sources of their distrust, but also their own suggestions for comprehensive community resilience strategies. We recommend enhancing accountability by explicitly undertaking a more equitable approach to guiding community meetings, approaching residents in their own language when the proportion of the population whose first language is not English is significant, like in the case of East Boston.

We also suggest a new type of relationship between the Massachusetts Port Authority and the communities in East Boston, where the first strives to become a trusted partner and detaches itself from the rapid gentrification process affecting the neighborhood. For that to happen, it is key for the Authority to reconsider its role in the expansion of high-end waterfront development and to make their relationships with planning authorities and developers more transparent. As expressed by the residents, Massport should evaluate mitigation actions for their activity that not only have an immediate impact on the quality of life of the neighborhood, but also a long-term, intergenerational one.

Recommendations to address the division among the views of resident groups and those of organizations and authorities regarding the status quo of multi-dimensional vulnerability in East Boston speak to the need to increase dialogue about the root causes of systemic injustice in the neighborhood and beyond. Putting those who are more in need at the center of climate resilience actions will provide genuine legitimacy to policies and plans, while at the same time taking steps towards achieving justice for those who have been historically dispossessed and discriminated.

Currently, East Boston residents claim they are not aware of an incremental and participatory evaluation of the plans implemented in the neighborhood. In this sense, the fact that communities feel unwelcome in their own neighborhood should be a clear signal to planning authorities that plans to improve residents' quality of life have become, at least, a partial failure. Whatever measures the neighborhood designs and implements to address community vulnerability need to be monitored and corrected before causing avoidable damage to the social tissue. We offer one framework that has the capacity to involve planners, advocates, and non-experts in the monitoring and evaluation of the interventions carried out in their neighborhood, but many others may be considered to support a more inclusive type of development in East Boston.

We believe there is a duty from the public sector and relevant stakeholders shaping climate resilience to increase their awareness of the processes exacerbating socioeconomic vulnerabilities, besides the exposure to the physical environment. The case of East Boston shows that climate resilience strategies that largely increase the value of real estate and tax revenue may not be aimed at working class communities, but at what Gould and Lewis (2008) call a *sustainability class*.[61] Well beyond that, the hope for East Boston is that climate action will be the vehicle to address historic systemic injustice and harmonize protection from climate impacts with economic opportunities and social mobility for the next generations.

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