

1) #NMCA OVERVIEW

Over the past several years, climate change has begun to exact a disproportionate toll on the poor and working class people of New York City. For the economically precarious, climate change can drive them further into poverty and ultimately lead to their displacement. During Hurricane Sandy, we saw that marginalized communities lost their homes, jobs, and more, at a higher rate than others. And yet, to this day, the political and economic dynamics that precipitated Sandy's fallout have hardly changed.

In order to protect NYC's most vulnerable people from climate change, the NMCA promotes environmental policies that also address the root issues of inequality. Conflicts in terms of class, race, gender, ethnicity, and age, need to be mitigated and overcome, not simply the impacts of rising sea levels.

The NMCA addresses these issues by working to increase democratic activity within and outside of the government. For its vision to be implemented, we must engage with the legislative process, while building our own systems of economic exchange and urban development that are not dependent on a faltering public sector.

The ideas within the NMCA are the result of a six month-long planning process led by WE ACT for Environmental Justice, and done in partnership with a multitude of stakeholders (listed on the back cover). The core ideas in this plan were generated during seven workshops held between January and June of 2015, in which hundreds of New Yorkers participated.

The plan's study area includes the neighborhoods of Inwood, Washington Heights, West Harlem, Central Harlem, and East Harlem (Figure 1). Over 600,000 people, mostly African American and Latino, reside in these neighborhoods. Over 20% of the area's residents live in poverty, a rate substantially greater than the rest of Manhattan's 14% average.

Inequality across the city is that 20% of all household earners control over 54% of the City's wealth. Since 1990, the top 1% of earners have seen their median income grow from \$452,415 to \$716,625, while the bottom 10% of earners saw their income increase modestly, from \$8,468 to \$9,455. These statistics demonstrate that some people are dramatically better prepared to absorb the shocks of climate change, largely because NYC's disparity in wealth also translates into an advantage in political power and access to resources.

As we invest billions of dollars in preparing for climate change, those investments should be leveraged to address other social crisis, such as chronic unemployment, poor diet, mass incarceration, and quality of education, among others. Otherwise, we will have prevented climate change from erasing NYC, but the slow erosion of gentrification will swallow much of what's left.

In terms of the physical impact that climate change will have on Northern Manhattan, it is predicted that by 2100 we could see temperatures climb by up to 8°F, sea levels rise by up to six feet, precipitation increase by 13%, and what are now once-in-100 year floods occur once every eight years. These are "worst-case scenarios," but even the best-case scenarios pose a grave threat to Northern Manhattan's people and infrastructure, including utilities and transportation routes critical to the City as a whole.

To download this plan and for more information visit: <http://weact.org/climate>

2) CLIMATE CHANGE & SOCIAL EQUALITY

The NMCA uses the frameworks of environmental justice, the resilience, and social cohesion to guide its recommendations.

Resilience, as defined by the New York City Panel on Climate Change, is "the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a potentially hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures."

However, environmental justice work strives to improve upon existing socio-economic conditions, not simply restore and maintain them. Therefore, as is argued in "From Resilience to Resourcefulness: A Critique of Resilience Policy and Activism," definitions of resilience must be expanded to avoid "[privileging] established social structures, which are often shaped by unequal power relations and injustice" and "[closing] off wider questions of progressive social change which require transformation of established systems." In other words, we must ask if the economy should "conform to meet the needs, values, and vision of a democratic society, or evolve to advance the capitalist system," regardless of its impact on our social fabric.

As Melissa Checker points out in her article "Wiped Out by the 'Greenwave': Environmental Gentrification and the Paradoxical Politics of Urban Sustainability", our over-dependence on systems of private investment leads to "environmental gentrification [that] builds on the ... successes of the urban environmental justice movement and appropriates them to serve high-end redevelopment that displaces low income residents." As such, "the efforts of environmental justice activists to improve their neighborhoods...now help those neighborhoods attract an influx of affluent residents."

This plan supports the growing movement in NYC to recognize the crucial connection between climate change and social equality. By working together, we hope we can implement comprehensive reform that empowers the struggling masses to remake the city in their own vision, and not be victims to the hyper privatization and environmental degradation that threatens us all.



Discussion at an April 4, 2015 climate change workshop organized by WE ACT. The workshops was one of seven that used "serious games" to plan climate actions.

3) CONCEPT ONE: ENERGY DEMOCRACY

According to the U.S. Energy Information Administration, New Yorkers pay the nation's second-highest energy prices. This manifests as a disproportionate cost burden for low-income New Yorkers, which threatens not only their ability to retain access to energy services, but also limits access to housing, healthy food, healthcare, and other costly necessities. Therefore, this plan calls for all green energy projects to provide direct economic and environmental benefits to low-income residents. This may be achieved through local hiring agreements, investments in neighborhood companies/organizations, and creation of systems for tenants to lead change within their own communities.

One type of energy improvement that aligns with this goal is known as Distributed Energy Resources (DER), specifically in the form of microgrids. Microgrids are small geographic areas that produce their own energy using renewable resources (wind, solar, geothermal, etc.) and are therefore not dependent on the main grid. Such systems can confer direct economic benefits on low-income residents by creating manufacturing, construction, and maintenance jobs while also providing savings. However, regulations must be passed to ensure that cost savings are passed down to tenants, not absorbed by property owners or middlemen. Green energy cooperatives can help maximize the economic benefit for tenants in this manner. Cooperatives allow homeowners, property managers, and other local stakeholders to pool their resources to construct and manage their own microgrids, affording them maximum control over generation, consumption, and costs.

In our workshops, people consistently expressed a desire for a more robust and democratic system of tenant associations. Such associations are an essential ingredient in the creation of larger systems of common property/resource ownership and management, such as cooperatively-owned microgrids. The fact that members of tenant associations already share a roof over their heads makes the prospect of "shared solar" that much more attractive.

As a member of the Energy Efficiency for All Coalition, WE ACT has already begun work to connect community members with renewable energy sources and efficiency improvements and to explore options for microgrids under the New York State Public Service Commission's Reforming the Energy Vision (REV) process. With the support of other partners such as Solar One and the City University of New York, Northern Manhattan could see microgrid pilot projects and large-scale investments in energy infrastructure in the near future.

But ultimately, as Trade Unions for Energy Democracy recently stated, "the transition to an equitable, sustainable energy system can only occur if there is decisive shift in power towards workers, communities and the public." In making such a transition, we must confront what Energy Democracy Initiative recognizes as a fundamental "clash between the priorities of political elites and corporations on one hand, and the needs of the masses of people for a truly socially and environmentally sustainable society on the other."



The Mother Clara Hale Bus Depot, complete after 10 years, is NY's first LEED certified bus depot. Bus depots in Harlem house the buses many NYers use, especially when subway service is suspended, but result in pollution and respiratory problems for local residents.

4) CONCEPT TWO: EMERGENCY PREPAREDNESS

As Hurricane Sandy brutally showed, New York City's residents, government, and physical infrastructure are extremely unprepared to withstand a severe natural disaster. After Sandy, areas such as the Hockwages experienced "total blackouts" with "no communications to speak of". Residents had to resort to bullhorns to relay messages, print fliers at home to share information, and physically "congregated at local hubs like churches...and schools" to communicate.

In order for NYC to be prepared for the next Sandy, neighborhood-specific preparedness plans must be devised, climate-proof communication systems must be developed, and necessary physical resources, such as flood protection infrastructures and space for storage of food and medicine must be built out. In addition, much of the suffering in Sandy's aftermath resulted from misappropriation of resources, not from a lack of public/private capacity. Therefore, in any future disaster, opportunities for more community input in resource distribution must be created to ensure that resources (and institutions) are appropriated for the public good.

The emergency response plan included here focuses on creating a locally-managed communication system that operates in analog and digital formats and that can effectively direct vulnerable populations to necessary resources during a climate crisis. This communication system will include wayfinding tools (signage), social media plans, physical message boards, means for crowdsourcing, and tools to direct people to cooling centers, energy supplies, medicine, food, and water. In the long-term, this communication system can be used to foster

robust democratic participation in emergency response decisions. Building flood protection infrastructures such as coastal barriers, mainland rain gardens, bioswales, and more can ensure that our private and public spaces are protected. Involving residents in the creation of green spaces can also, in and of itself, aid in recovery from crises, as giving people the chance to express their instinctive "affinity for nature" through the "creation of restorative environments may [bolster] resilience." NYC already provides some financial support for the construction of open space and green infrastructure: the Department of Environmental Protection has committed over \$208 million to its Green Infrastructure Program, while the Department of Parks and Recreation's City Parks Initiative, which carries out park improvements in underserved neighborhoods, is worth \$130 million.

The Department of Health and Mental Hygiene is currently exploring the possibility of developing neighborhood health hubs. In addition, it possesses valuable information regarding who is most in need of assistance during heatwaves and other emergencies. Further advocacy can be done to encourage DOHMH and the NY state government to expand the Low Income Home Energy Assistance Program to include air conditioning and other necessities.

Community Emergency Response Teams (CERT) are also integral to planning and recovering from a disaster. Other programs that support this objective include the NYC Citizen Corps and the Office of Emergency Management's (OEM's) ReadyNY Campaign and NYC Readiness Challenge.



After Hurricane Sandy, many residents without the means to relocate were cut off from their jobs, families, healthcare services, and more. Several years later, those areas are still recovering, while other areas have yet to be prepared.

5) CONCEPT THREE: SOCIAL HUBS

In the immediate future, development of more physical spaces for activities related to movement-building is key. Providing spaces for local activists to organize meetings, produce materials, and incubate projects is a crucial and perpetually-needed resource. It also serves the basic function of bringing diverse groups together and building community cohesion, while also accommodating the need for community gardens, libraries, green energy infrastructure, artists' workshops, and more.

Large cities that have recently experienced changes in political power that favor the working class, such as Madrid and Barcelona, have credited "social centers" for playing an important organizational role. While subsisting on small membership fees or income from bars or cafes, many such spaces served as crucial gathering spaces for community activists. This resulted in the development of political strategies and actions that have now led to concrete electoral success.

Residents of Washington Heights, have recently been demanding a gathering space as part of a multi-million dollar Port Authority bus terminal renovation. When they were offered only a meager 250 square feet of space, Councilman Ydanis Rodriguez responded, "our community is left out entirely. Port Authority, we do not want any slumlord in our community, so we demand that you do your part." Whether or not the Port Authority ultimately heeds the demands of this community, establishment of such spaces is essential.

By the rich composition of people that live locally, could help facilitate similar interactions in Northern Manhattan. In fact, several such "hubs" are already having an impact, such as Word Up Bookstore, Libreria Comunitaria, The Brotherhood Sister Sol, and more.

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The abandoned 135th Street Marine Waste Transfer Station presents an opportunity to develop a community space on the waterfront, which can be used to monitor the impacts of climate change, build social cohesion through community events, and provide space for public meetings, research labs, galleries, and other workspaces.

Figure 1 - Northern Manhattan



6) CONCEPT FOUR: PUBLIC PARTICIPATION

Changing the political dynamics in NYC so that low-income residents are not excluded from policy-making is crucial to the effective implementation of this plan. Without a change in the current distribution of political power, only limited, cosmetic gestures will be made to protect low-income groups from climate change; little will be done to change the fundamental, underlying problem of poverty.

Organizing deeper participation in existing systems of governance and also creating new, more responsive systems when necessary can help shift the balance of power towards the underclass. This initiative should include, but not be limited to, the following activities: increasing political education and mobilization through protests and direct actions, developing partnerships with governmental and non-governmental allies, writing educational curricula, organizing involvement in participatory budgeting, and building participation in the electoral process.

Participatory budgeting (PB), and, in the future, participatory legislation, have been proven to bolster civic participation. A 2011 study of PB that compared five Brazilian municipalities with PB to five without it found that the effect of participatory budgeting "was to increase the flow of information about municipal governance, create a space for citizens to voice their demands and to scrutinize what were once highly insulated and

discretionary decisionmaking processes," allowing citizens not only to allocate monies, but also to "bargain from a position of greater strength with municipal authorities" in general. In NYC, PB should be expanded to the 9th City Council district - the only district in Northern Manhattan that does not currently offer PB.

Around the world, we are seeing a resurgence in the belief that democratic activities can put an end to the disastrous results of fiscal austerity and the broader ideologies of neoliberalism. Whether at the 2014 People's Climate March or a Black Lives Matter demonstration, people are demanding greater control over the policies and institutions that have, up until now, controlled their livelihoods without their input and created an oppressive society in the process. In July of 2015, the Greek people, heeding the Prime Minister's calls for them "to decide - with sovereignty and dignity" to not accept the "extortionate" policies that could prevent them from "ever standing on [their] own two feet, socially and financially," used democracy to reject the weight of the global financial system and its unquenchable thirst for public monies. And in Spain, recent municipal elections have shown that including diverse ideas in political platforms can create broad partnerships that cut through historic divisions, uniting the people and moving them towards a more just future.



The De Blasio administration has made several gestures towards increasing public participation in policy-making, but much more can be done to connect the will of the people to NYC's economic and environmental policy outcomes.

7) NEXT STEPS

In order to implement the NMCA, we must (1) Increase democratic participation in the development of City policy and (2) Build grassroots infrastructure that allows communities to control their own responses to climate change.

In order to achieve these goals, we must continue to work with a wide network of New Yorkers to build the critical mass necessary for profound, systemic change. Thus far, it has been an honor to build connections with a wide variety of actors from the local and international climate justice communities, many of which are represented in the attached diagrams in the back page. The countless presentations, conversations, and correspondences that went into this project have not only created this plan, but have also facilitated relationships among community members that help us to better understand what our responsibilities are as New Yorkers. Strengthening these relationships is imperative if we are to carry out wide-scale action that will change City policy and build systems of participation and mutual aid at the local level.

Some of the specific policy actions the NMCA proposes are listed below.

The primary policy target of the NMCA is OneNYC, the City's chief policy framework

on environmental and other issues, which is due to be revised in 2019. A few of the many environmental objectives listed in OneNYC are to "invest in emergency shelter sites to accommodate 120,000 New Yorkers with disabilities," fund "physical assets for emergency response" as well as community-centered education projects, and create green jobs and local hiring plans to benefit those most in need of economic opportunities.

In terms of the City Council, the NMCA targets the chairs of the Environmental Protection, Land Use, Transportation, Waterfronts, Parks and Recreation, Sanitation and Solid Waste Management, and Economic Development Committees, among others. These committee chairs will be called upon to take action for climate justice and will be pressured by constituent actions. The Black, Latino, and Asian caucus and the Progressive caucus, are natural allies in this campaign. In terms of electoral politics, a voter engagement strategy must be developed for the 2017 elections that identifies key races, registers voters, seeks commitments on climate justice from candidates, and generally increases public participation in the electoral process.

Community Boards 9, 10, 11, and 12 will prove critical in advancing our policy recommendations. In the past, WE ACT has partnered



The North River Sewage Treatment Plant is an example of the undue environmental burden facing Northern Manhattan. Originally planned for 72nd Street, it was built instead at 135th to allow room for Robert Moses's Riverside Park on the Upper West Side.

7) NEXT STEPS CONT'D

with Community Board 9 to participate in the Department of City Planning's 197-a program, which supports community-based urban planning. We will continue to build these partnerships around the proposals of the NMCA.

In addition to OneNYC, the One City, Built to Last plan is of great importance. It lays out the City's plan to reduce its carbon emissions by 80% by 2050 and centers on improving the energy efficiency of NYC's building stock. A recent report by the Alliance for a Greater New York (ALING), stated that efforts associated with One City, Built to Last may require over \$5 billion in investments every year and could create 82,000 new jobs annually from now to 2050. In the plan, the City also pledges to support community-shared solar projects and to train and hire community members for new green jobs. The plan's Retrofit Accelerator Program could spur further construction and energy improvements in Northern Manhattan, and is connected to DEP's Clean Heat program, which WE ACT has been involved in implementing.

Besides energy efficiency investments in buildings, we need large investments to improve stormwater management infrastructure, alter the design of our streets and mass transit systems, and protect our coastal



Many areas in Northern Manhattan, particularly in East Harlem, do not have enough open space or tree cover to mitigate the urban heat island effect. This problem is exacerbated by pollution from local infrastructure, such as bus depots.

8) PROJECT TEAM

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www.weact.org/climate

West Harlem Environmental Action, Inc. (WE ACT for Environmental Justice) is a Northern Manhattan community-based organization whose mission is to build healthy communities by ensuring that people of color and/or low income participate meaningfully in the creation of environmental policies and practices.

WE ACT staff members that contributed to this project include: Peggy Shepard, Cecil Corbin-Mark, Aurash Khawarзад, Louis Bailey, Charles Callaway, James Burke, Matt Deen, Amber Myers, Ogonyaya Dotson-Newman, Evelyn Joseph, Carlos Jusino, David Chang, Hector Gerardo, Jalonne White-Newsome, and Stanley Fritz. Additional support was provided by WE ACT interns including Naima Drecker-Waxman, Meera Vaidya, Theo Judd Hilton, Peiyu Phua, Sophia Jose, Griffin Levine, Omar Hamdad, and Betina Araujo.

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Hand-drawings and cover by: Mateo Fernandez-Muro
Co-edited by: Victoria Hoffmeister

Serious Games were designed by Michael McDonald of OVJAR Global Resilience Systems, an organization engaged in international emergency preparedness and resilience efforts.

Scientific research support was provided by Cynthia Rosensweig of the NASA Goddard Institute for Space Studies and Patrick Kinney of the Columbia Mailman School of Public Health.

Participants who supported this project by means of meeting facilitation and research include: Lisa Hamilton, Elizabeth Guerra, Cecilia Pineda, Tony Santiago, Jewel Jones, Maria Garcia, Rita Miller, Perry Sheffield, Mason Cavell, Oronde Tennant, Sarah Fischer, Carlton Davis, Alicia Barksdale, Diana Blackwell, Tina Johnson, Sarah Martin, Arnold Boatner, Euline Williams, Josette Bailey, Deirdre Aherne, Diane Hymans, Evelyn Knapp, Naomi Moreira, Raya Salter, Rory Christian, Jeanelle Roman, Jacqueline Hurt, Helen Jones, Jonathan Marable, Maria Lynch, Rodney Cromartie, Ramon Ramsey, Juan Rosa, Lazelle Williams, Glen Holloman, Kelly Moltzen, Daniel Carrion, Victoria Lee, Grace Tuttle, Johann Vollenhoven, Karmel Al Labadi, Danielle Peters, Manishka de Mel, Erika Lindsey, Ilyia Azaroff, Ibrahim Abdul-Matin, and many more.

New York City public agencies that supported this process by providing policy information include: NYC Department of Health and Mental Hygiene, Office of Emergency Management, Department of City Planning, Mayor's Office of Sustainability, Mayor's Office of Recovery and Resiliency, and Department of Environmental Protection, among others.

Additional organizations that supported this project include: Environmental Defense Fund, Environmental Health Services Center, USA Family Health Services, Microecologies, Inc., Natural Resources Defense Council, Morgan Stanley Children's Hospital, Manhattan Neighborhood Network, Asocacion de Mujeres Progresistas, Inc., Mount Sinai Children's Environmental Health Center, West Harlem Group Assistance, Brotherhood Sister Sol, Community League of the Heights, Corbin Hill Food Project, Hamilton Heights Community Preservation Organization, Office of Councilman Mark Levine, Office of Councilman Ydanis Rodriguez, Word Up Bookstore, Harlem Community Development Corporation, Parsons The New School for Design, Pratt Institute, American Institute of Architects, NY Chapter, Manhattan Community Boards 9, 10, 11, and 12.

Project supported by the Kresge Foundation

NOTES

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#NMCA RESILIENCE CONCEPTS

The following concepts were generated by project participants as measures that can protect our environment while reducing socio-economic inequality. Logos indicate potential partnerships, not formal agreements. Writing and layout by: Aurash Khawarzarad (@khawarzarad), Hand-drawings by: Mateo Fernandez-Muro (@Matufus) More info at: <http://weact.nyc/climate>



Coastal Protection

Coastal areas, particularly those in the floodplain shown in Figure 1, are in need of green infrastructure that provides ecosystem and flood protections. NYC is currently implementing a coastal protection project worth \$3.7 billion and has released its first-ever comprehensive coastal protection plan, A Stronger, More Resilient New York. The plan seeks to deepen public participation in waterfront restoration and protection by expanding the

Waterfront Management Advisory Board and includes pledges to undertake feasibility studies for construction and restoration of flood-prone areas. DEP has also spent over \$40 million to-date on wetlands restoration and other coastal protections. What remains to be seen is the extent to which developments will encompass community-based plans or be leveraged to gentrify waterfront areas.



Networked technology controls energy usage and monitors environmental conditions.

Community Land Trusts (CLT)

Organizing property ownership through a CLT is one way to preserve affordable housing by removing properties from the speculative market. CLTs also allow participants to collectively use space for local agriculture, energy production, recreation, and even social services such as childcare. Such shared governance structures can help rebuild the commons in terms of how we use space/resources.



Affordable Cooperative Housing

The City plans to create and/or preserve 200,000 units of affordable housing between 2015 and 2025. This will be done by maximizing use of City-owned land, mandating inclusionary zoning, and providing tax incentives to developers, among other things. However, many are skeptical that these efforts will provide the necessary amount of housing at truly affordable prices (particularly for vulnerable populations such as the homeless, criminalized populations, the elderly, etc.). Therefore, new cooperative homeownership mechanisms such as community land trusts must be explored.

Social Hubs

Community meeting spaces are crucial to support ongoing planning efforts, as they are necessary for local organizations to host educational programs, hold meetings, produce materials, use for storage, etc. Having a local hub open for community use can support centralized planning and production activities while remaining grounded in local needs and capacities.

Multipurpose Infrastructure

New design guidelines should be implemented so that waterfronts promote industrial activities while remaining accessible to the public. This can be done through constructing green spaces that both mitigate flood damage and support water-based transportation should be constructed. These spaces are also important for cooling the urban heat island and supporting physical activity, local agriculture, and more.



Local Markets

Manufacturers, farmers, and other "makers" within the hub can sell their goods at local markets, which support non-conventional commerce, including bartering networks and alternative currencies.



Ferry Service

The West Harlem Piers (pictured below) is a good location to add ferry services for daily commuters and to create alternate evacuation routes. OneNYC calls for several new ferry routes.



Food from the Hudson Valley

Farms in the Hudson Valley can make use of improved waterfront infrastructures to ship food into NYC, which can strengthen NY state's economy while providing healthier food options for local food deserts. OneNYC plans to invest \$100 million in marine terminals for freight movements.



Cooperatively Owned Microgrids

Both the City and state government have called for an expansion of distributed generation (DG) technology, including wind, solar, and geothermal. This plan supports the implementation of DG in the form of microgrids that are deployed in vulnerable areas and/or are managed by local stakeholders. The City is currently undertaking a microgrid feasibility study and removing policy roadblocks to microgrid construction by working with ConEd and the Public



Service Corps to revise ConEd's standby tariffs to lessen economic impediments to DG. Microgrids provide multiple benefits, including reliable power when the main grid experiences a blackout, reductions in energy costs, more control for residents over their own energy consumption, and employment opportunities.

Community Bank

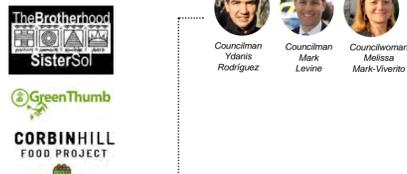
Financial services should be provided by local institutions connected with the community. Locally-run finance can shift the focus of banks away from their short-term profit, towards long-term investment in infrastructure, development of small businesses, and other much-needed investments in shared resources that will benefit the community.

Places of Worship

Churches, mosques, synagogues, and other religious institutions provide flexible spaces for community planning and emergency services, while conveying important climate-related messages through religious practices. Many churches, urged on by Pope Francis, are joining the struggle for climate justice.

Urban Agriculture

Local agriculture is an integral component of climate resiliency, as it helps build communities' self-reliance while reducing the massive petro-chemical footprint of existing industrialized food systems. The City plans to increase its number of community gardens by partnering with schools, helping gardeners sell their produce at farm stands, and supporting urban farms through



Participatory Budgeting

In April 2015, over 51,000 NYC residents voted on how to allocate \$52 million to various locally-developed capital projects across 24 NYC Council Districts. Participatory budgeting is a clear example of how residents can be made to engage directly with governance systems to tailor policy to their needs. Given the level of site specificity essential to effectively address climate change issues, PB should be expanded to encompass more of the City's budget, green projects, and longer-term investments.

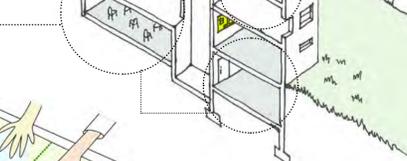
Resilient Housing

True victory in the climate struggle is not simply based on the preservation of physical conditions, but also on the achievement of lasting security for communities that are now under threat of displacement. Therefore, affordable housing should be a priority for climate advocates, just as it is for the Mayor's office and many NYers. Supporting NYCHA by reinvesting in its infrastructure is a necessary first step, but we must also ensure that further price hikes do not happen and that NYCHA property leased to private developers does not cause further gentrification. Simultaneously, alternative models for transitional housing, such as the Sugarhill development by Broadway Housing Communities should be explored.

It is particularly important to ensure that homes are cool enough for the elderly. Between 2000 and 2011, 85% of those who died from heat in NYC died in their own homes.

"NYCHA has an important role to play in reducing this city's carbon footprint and I look forward to [making] our public housing more efficient and resilient"

-Council Member Ritchie Torres



Information Kiosks

After Hurricane Sandy, locally-produced signage played an important role in connecting people with networks and resources that supported recovery efforts. Public signs and stands should be created across the City to provide information on cooling center locations, evacuation zones, and other important resources.

Flooding Barriers

The thirteen-plus miles of coastline in Northern Manhattan are home to thousands of residents, small businesses, manufacturing spaces and important pieces of municipal infrastructure. Many of these, particularly in East Harlem, are located within the Hurricane Evacuation Zone and should therefore be hardened against flooding. Flood protections should be planned using design guidelines that prioritize the creation of public space, access to the waterfront, and bicycle route connectivity.

LinkNYC

Logos for various organizations including NTA, NYC DOT, and others.

Affordable Public Transport

In recent years, bicycle lanes, bus system facilities, and subway routes have been constructed in Northern Manhattan. These services can provide important transportation options should other transportation resources be damaged in a storm. However, rising transportation costs are also increasingly limiting transportation access for low-income groups. Transportation options should be made more affordable, perhaps by means of more public investments, expansion of the bikeshare system, and reduced costs for subway and bus services. Transportation services should also be made free to low-income residents during emergency situations.

Manufacturing Facilities

Northern Manhattan's coastal and interior areas provide many opportunities for light industrial activities (manufacturing of consumer goods), which can both provide jobs for low-income residents and produce tools for local climate resilience. Public and private financial institutions, organized labor, and local organizations that focus on workforce development can work together to create local employment opportunities, develop green energy technology (solar, wind, etc.), green transport equipment (bikeshare systems) and other basic necessities such as textiles and foodstuffs. Organized labor is already exerting a strong influence on City climate policies. The City Council has announced that it will fund 22 new cooperatively owned businesses in FY 2016.



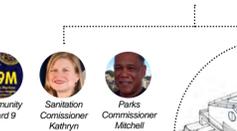
Live/Work Spaces

One of the most effective (yet currently underutilized) tools for communication in relation to climate change is the arts. However, it is difficult for young artists to secure live/work spaces in NYC, forcing them to leave NYC for other cities. As a result, OneNYC pledges to develop 1,500 live/work spaces, including 500 affordable units, by 2024.



135th Street Marine Waste Transfer Station

For several decades, the Marine Waste Transfer Station at 135th Street polluted the Hudson River alongside West Harlem, the neighborhood of Hamilton Heights, and other nearby areas with a 24-hour stream of garbage trucks and barges. The now-abandoned facility represents an exciting opportunity to create a permanent climate resilience center that can support local organizations, educational/cultural programs, freight movement, citizen science, and other climate-related efforts. Several City Council members, Manhattan's Borough President, the Parks Commissioner, local Community Board representatives and others have formally stated that they are in support of such a project.



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