Redefining Resilience

Center for Resilient Cities and Landscapes, 2020

work by:

COLUMBIA | Center for Resilient Cities and Landscapes

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COLUMBIA UNIVERSITY
Center for Resilient Cities and Landscapes

Redefining Resilience in 2020

THE FUTURE OF THE URBAN RESILIENCE MOVEMENT

The COVID-19 pandemic has been tragically compounded by long-festering stressors in our cities and society: unequal access to healthcare, education, employment and housing; concentration of wealth and power; erosion of trust in science and government; and the unceasing anti-Black racism pervading society and manifesting in police violence and the school-to-prison pipeline. As wildfires rage in the west and hurricanes slam into the East and Gulf Coasts, climate scientists remind us that the cascading disruptions of climate change threaten to deepen these wounds. When every injury resurfaces and amplifies past injury, what is resilience?

PROTESTERS IN RED HOOK BROOKLYN DURING CLIMATE WEEK 2019, AND A SIGN EXPRESSING A DIRE CLIMATE FUTURE UNLESS WE ACT

A "resilient" recovery is said to prioritize addressing root causes of hazard, like rebuilding a house on a higher foundation after a flood. Recovery rarely addresses root causes of vulnerability, like disabling the societal and economic drivers that have created housing, mostly for the poor, in sacrifice zones increasingly exposed to flood risk. As "resilience practitioners," do we remain too beholden to the status quo? We remain beholden because the status quo privileges our own power, or at least keeps the light on while we work. As urban planners and urban designers, we have long failed to acknowledge that our work is rooted and patronized by racist, corporatist, colonial and patriarchal systems. The events of 2020 have made it impossible to ignore or accept our complicity and have provoked fundamental examination of practices in the built environment that will take decades. The lessons of the urban resilience movement will help to shape that discourse, and may offer a guiding light to what's next for urban planners and designers.

When we began the Resilience Accelerator, our flagship program with 100 Resilient Cities, we aimed to support project-based resilience building. We asked, how can we better bridge science and academic research to policy-making and project design? How can we move more holistic "resilience thinking" upstream in the planning of infrastructure? How can we use targeted research and resources from philanthropy to change business-as-usual delivery of urban projects? We've made great strides in all of these areas, outlined in this report and previous. In every instance of our work, there has been one common conclusion: We have to work better together. Expertise is no substitute for collaboration. The threshold crisis facing cities today is not climate change, it is democracy. It is not having the right voices in the room when decisions are made, not exploring the other option suggested by the quiet person in the back row, and not having the capacity for collective imagination to envision a more just city.

In 2020 we chose and executed projects close to home where we could practice new methods, create space for shared experience and ideas, build trust with new partners, understand science in a local context, and promote healing and repair from historic and often violent divisions between groups of people and between people and nature. With every aspect of our work, we questioned the status quo:

RESEARCH: How do we re-frame place-based research, geospatial analysis and representation of risk, design scenarios and other planning methods as tools of empowerment? For instance, can we develop geospatial analysis methods that value lived experience on par with objective observation?

CONVENING: How can design workshops give voice to the under-represented? Can workshops better create the space for deep listening and partnership? How do we address power disequilibrium in stakeholder groups? Do we sufficiently value, celebrate and compensate those who risk much to speak their truth to power?

NETWORK: How are we learning from our work and sharing it to others? Can these dialogues be more inclusive?

With these questions, the Center for Resilient Cities and Landscapes is committed to re-centering our work towards environmental justice in all that we do: workshops, partnerships, research methods, and communications. To this end, we have begun the process of evaluating our working model and the value principles by which we source, partner, and carry out our work at the CRCL. In light of our mission to bridge the gap between science and policy and empower communities to adapt to the pressures of climate change, neo-colonialism and urbanization. Our goal is to hold ourselves accountable to our role within an academic institution as educators and creators of curricula, as a neighbor to the communities in Upper Manhattan, and role as planning practitioners in upholding systems of power that exclude and devalue human experiences and histories in preference to technical expertise. These objectives include commitment to:

1. Center activists representing the most marginalized and vulnerable in society, especially those that are unseen and underrepresented;
2. Platform the voices and stories of Black, idigenous, and people of color across our work;
3. Challenge existing planning and design paradigms, processes, and legacies especially as they pertain to engagement norms and procedures that drive policy making and project implementation;
4. Ground our work and partnerships in the specific legacy and histories of colonization on the built environment in the US and abroad;
5. De-construct the vulnerability created and enforced by planners and designers, not just address the impacts of these practices; and
6. Examine our partnerships in view of the spectrum of incremental and revolutionary change-makers.

THE WORK AHEAD : 2021 AND BEYOND

The vulnerabilities exposed by the pandemic, uprisings in response to centuries of racist oppression in the US, and tumultuous political and economic environment of 2020 have fundamentally shifted our approach to our work. These events have shaped a set of priorities for the immediate work ahead:

+ Capture and disseminate lessons from the urban resilience movement in curricula at Columbia University and beyond.

+ With a 3 year grant from the Earth Institute, we are building a Climate Just Cities network, integrating the management of this network into Columbia Climate School.

+ Inform and advance post-pandemic rebuilding, particularly bringing a resilience perspective to rebuilding infrastructure and the economy.

+ Continue to advance climate justice in our own backyard by supplying technical assistance to local environmental justice groups and City agencies.

BLACK LIVES MATTER PROTESTS AFTER
THE DEALTH OF GEORGE FLOYD

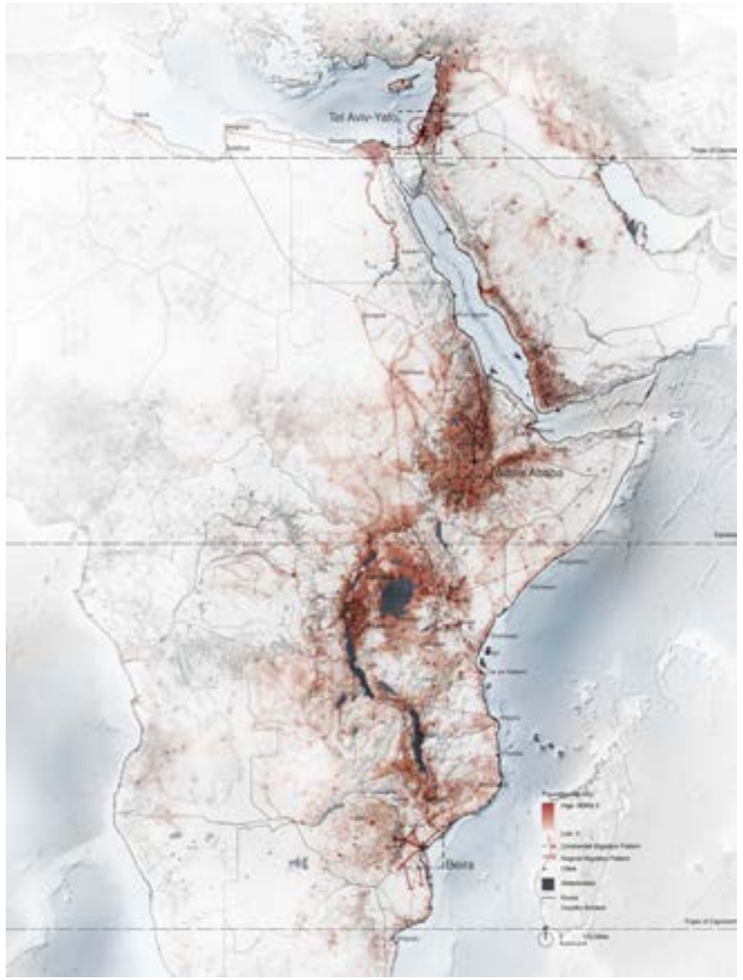
Cities on the Rift

EXPLORING URBAN RESILIENCE ALONG A GLOBAL TRANSECT

In the spring of 2020, CRCL and the GSAPP urban design program traveled to three cities along the Great Rift Valley. Tel Aviv, Addis Ababa and Beira face unique challenges, but their futures are all being shaped by global patterns of climate change, neo-colonialism, and urban development. By studying these phenomena across borders and bio-regions, these global trends and their complex intersections come into more clear focus. Even as these cities grapple with rising temperatures, devastating droughts, and extreme weather events, they continue to grow according to patterns of urbanization that place the most vulnerable at the highest risk; concentrate resources, wealth and power among the elite; and lock in patterns of energy and resource consumption incompatible with a global transition away from fossil fuel.

The Great Rift Valley is a series of contiguous trenches created by the divergence of tectonic plates that extend from Syria to Mozambique. The lakes, river valleys and plains created by the Rift provided fresh water for millenia, which allowed the earliest hominids to evolve and great cultures to flourish. While visiting these three cities, the CRCL team learned about local urban-environmental challenges and the current projects and policies designed to tackle them by meeting with city leaders and working with students from nearby universities. Together we imagined more resilient futures for communities and ecosystems.

"We are not just observing, we are actively teaching our students and partnering with local entities on how to integrate design and policy to



be a positive agent of change against what seem like intractable forces of privatization, displacement and top-down master planning," said Kate Orff, CRCL Faculty director.

In Tel Aviv, we learned how the historically marginalized neighborhoods in the southern half of the city are now facing a wave of gentrification and urban development. Even as this Mediterranean city faces the debilitating effects of rising temperatures and the urban heat island effect, developers and government continue

to supersize its buildings and roads. Our students explored development models that would strengthen rather than erase the city's underlying ecology and multi-cultural heritage.

In Addis Ababa, we were invited to collaborate on alternative visions for a project that seeks to "beautify" the rivers which run through this fast growing city. Cities all over the world now look to their rivers as multipliers of real estate value, but this often means displacing poor and vulnerable communities and up-rooting ecosystems. The studio explored ways in which traditional Ethipoian livelihoods of agriculture and micro-production could form the backbone of thriving and resilient urban development.

Beira Mozambique was devastated by Cyclone Idai in the spring of 2019, in this nation which faces all of the primary and secondary impacts of climate change: droughts, floods, cyclones, displacement, exploitive extraction, and civil unrest. Our studio worked with the local municipality, university and UN-Habitat to explore patterns of reconstruction for the city that would value their incredible natural capital and cultural history as a seaside city at the place where the freshwaters of the Great Rift Valley meet the Stratis of Madagascar.

In each of these cities, we explored the concept of "resilience" as a form of empowering local communities and ecosystems to survive and thrive in a world in crisis. Before the semester was over, we had gone from traveling thousands of miles to understand people and place to deep introspection of the role of design professions during the COVID lockdown. 2020 has been a year of hard lessons, but none was more clear than how design decisions about the future of cities will shape humanity's prospects in the century ahead.

SCENES FROM THE STUDY TRIP TO ETHIOPIA AND MOZAMBIQUE FEBRUARY AND MARCH OF 2020

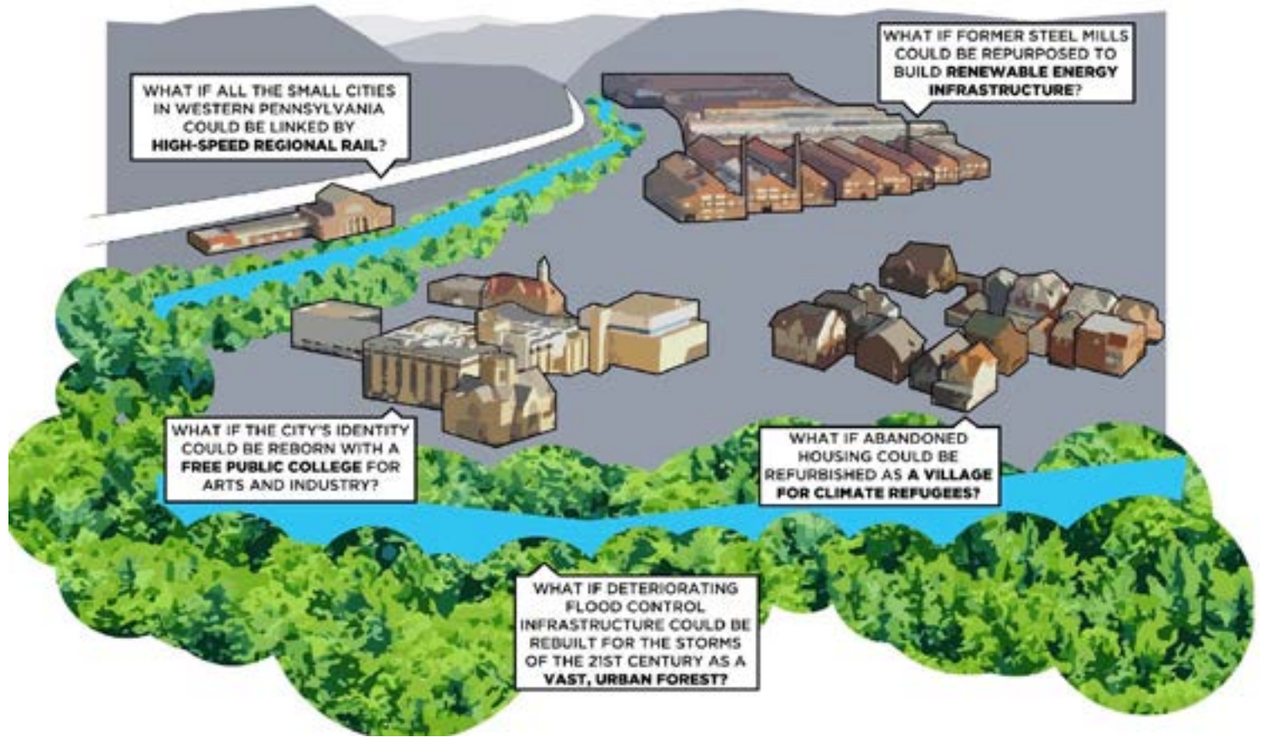
Green New Deal

RESILIENT INFRASTRUCTURE FOR APPALACHIA

Johnstown Pennsylvania is best known for surviving three floods. In 1889 a dam collapsed upstream sending a 40' high wall of water through a narrow valley uprooting everything in its path, destroying the town and leaving over 2,200 people dead. The dam was poorly maintained by its owners, a fishing and hunting club patronized by Pittsburgh industrialists such as Andrew Carnegie, Henry Clay Frick, and Andrew Mellon. Johnstown was a thriving coal-mining and steel milling center at that time; and the town was rebuilt rapidly starting with the steel mills. A second flood in 1936 prompted a massive New Deal era construction effort by the Works Progress Administration to channelize the rivers. These deep channels failed to protect the city from a third major flood in 1977. By that time, the coal mines had been spent and the steel industry had moved to cheaper labor markets. The last flood hastened the City's economic decline. In 1945 there were nearly 100,000 people living in Johnstown and today there are less than 20,000 living among abandoned buildings, empty lots, and brownfields. The economy has become more stratified with the poorest living down in the valley and the more prosperous in the hills above. The post-industrial towns of the rust belt were once strongholds of an upwardly mobile working class, but today, having been left behind by a global economy in a ravaged landscape, many here have fallen victim to despair, the opioid crisis and the extremist politics of Donald Trump.

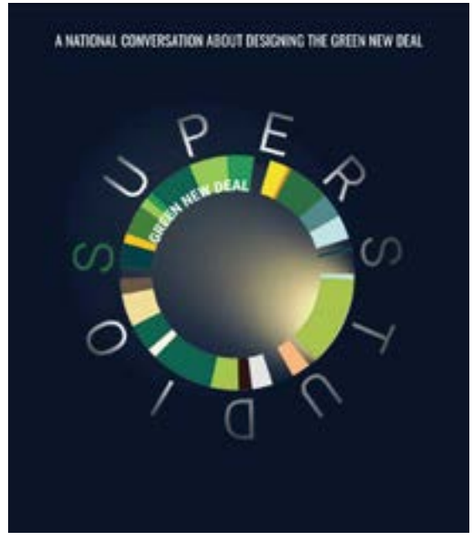
After running the Resilience Accelerator program for one year, we wanted to teach the process to GSAPP students of planning and urban design. At the same time, we saw an opportunity to apply the concepts of resilience to a national conversation about rebuilding America's infrastructure in communities that feel left behind. In academic and activist circles, this conversation gained steam with the introduction of the Green New Deal resolution into Congress by Representative Alexandria Ocasia Cortez; but these ideas of building local green economies don't get a lot of attention in small towns in Appalachia and the Rust Belt.

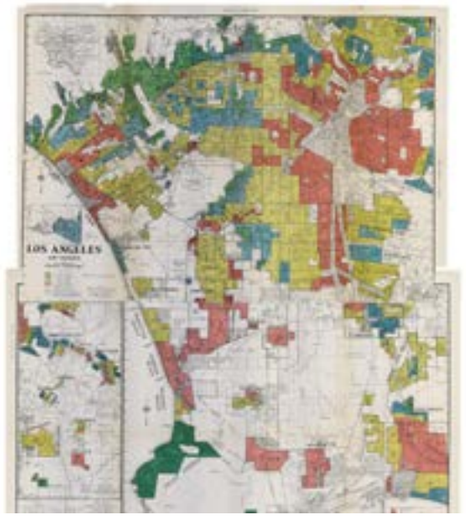
In partnership with local leaders and support from the Buell Center, we conducted a workshop in Johnstown to talk about how major public investments in infrastructure could help to grow the economy and restore hope in the future. The Army Corps of Engineers will soon have to spend millions of dollars to repair the aging flood walls, so we started with the idea that this might present an opportunity to restore the ecological, social and economic value of the rivers. Community members, business leaders, and government officials in the town used the workshop to reflect on history and their enduring pride in the resilience of Johnstown, and imagine a future that is guided by public and community investment in nature and infrastructure and not by the extractive industries. We captured the ideas from the workshop in an Op-Ed in the local paper, published on Thanksgiving Day and intended to inspire family discussions about a Green New Deal for Appalachia.



GREEN NEW DEAL NATIONAL SUPERSTUDIO

In 2020 we are partnering with Landscape Architecture Foundation (LAF), McHarg Center for Urbanism and Ecology on a Green New Deal Supserstudio. This historic year-long, national event is open to all design schools and professional practices or other design and planning related organizations across the United States who will all simultaneously participate in studios that translate the core goals of the Green New Deal–decarbonization, justice, and jobs–into design and planning projects for their respective regions. What these projects are, where they are, and how they manifest the ethos of the Green New Deal are at the discretion of each studio. The Superstudio connects policy to spatial planning and design with regional and local specificity, and these regionally-based concepts and dialogue produced through the Superstudio will be catalogued as part of a curated collection to form a national vision for the Green New Deal. The ideas and discussions that emerge from the Superstudio will inform the Landscape Architecture Foundation's next summit in September 2021, which will convene designers for a national conversation on policy and design to inform and catalyze future action.



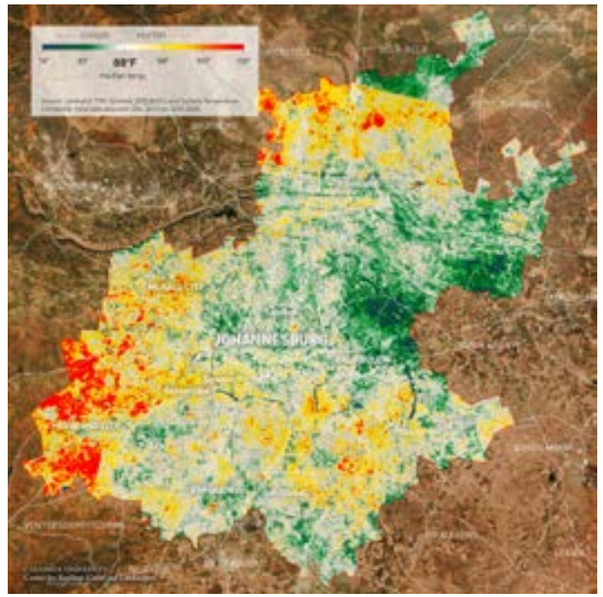


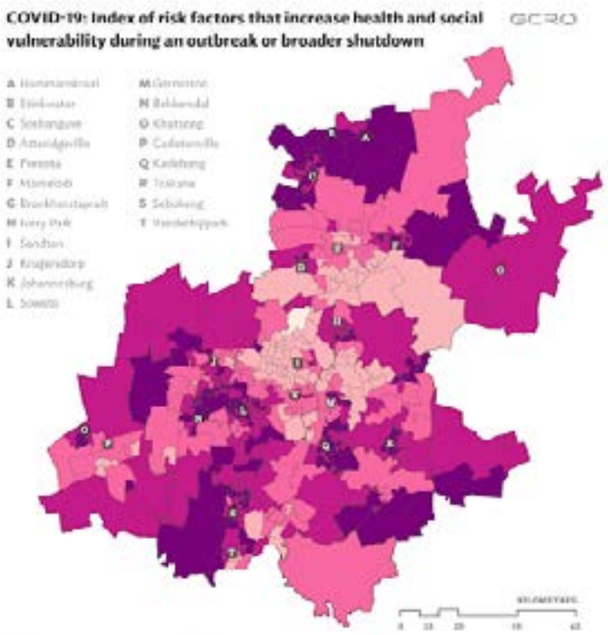
LOS ANGELES: SUMMER 2019 LST COMPOSITE COMPARED TO 1939 HOME OWNERS LOAN CORPORATION (HOLC) "REDLINING" MAP

Can you see Racism From Space?

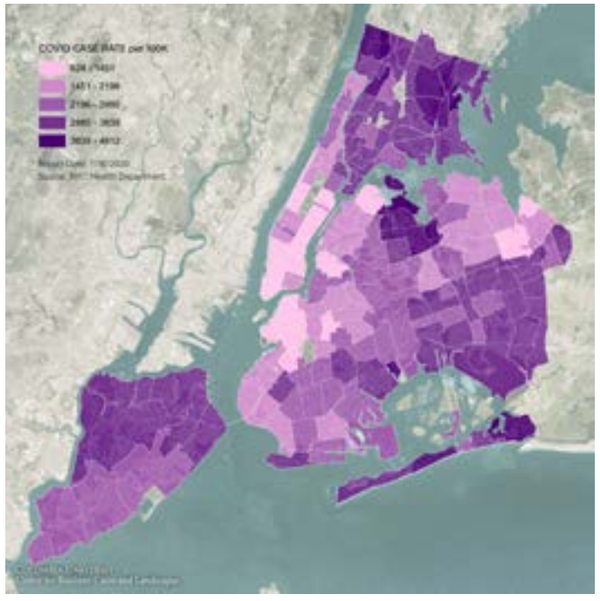
MAPPING COMPOUND AND INTERSECTIONAL VULNERABILITY

Risk mapping is time and resource intensive, challenging decision-making and public communication. This difficulty can result in the delay or limitation of needed resources and obstruction of community-led design and planning. Considering one driver and/or hazard at a time can lead to an underestimation of risk and impacts. Hazards often occur simultaneously or successively (for example, COVID-19 and an extreme heat event), which can have a multiplier effect on the risk to society, infrastructure, and the environment. And no matter how long and seemingly comprehensive the list of social sensitivity indicators, they can never paint a complete picture of community vulnerability – these are only proxy variables assumed to represent the majority of risk factors related to a specific environmental hazard. We are testing a novel "material" approach to risk mapping: using land surface temperature (LST) as a proxy, or key indicator, for conditions of environmental vulnerability. These conditions in the built environment have arisen from systematic environmental injustice including the location of noxious infrastructure and industry in "fence-line" communities, the erasure or paving-over of sensitive ecological areas such as wetlands and floodplains, the lack of provision of open space and planting in historically disinvested areas, and legacy of racist and segregationsit housing policies that have concentrated social vulnerability in these same locations. As a proof of concept, we compared LST maps of four urban areas — Los Angeles, Houston, Brooklyn, and the Gauteng province —with other historic or current maps of vulnerability an/or inequality. We are currently working to expand this study into additional urban areas, gather insights from stakeholders, and prepare a methodology that can be scaled virtually anywhere and by anyone in the world where environmental injustice persists.





GAUTENG PROVINCE: SUMMER 2015-2020 LST COMPOSITE COMPARED TO 2020 GAUTENG CITY-REGION OBSERVATORY (GCRO) COVID-19 VULNERABILITY ASSESMENT MAP



NEW YORK CITY: SUMMER 2013-2020 LST COMPOSITE COMPARED TO COVID-19 CASE RATE AS OF 7/16/2020

THIS WORK HAS BEEN SUPPORTED BY CONRAD N. Hilton FOUNDATION

Urban Heat and Wildfire Resilience in Southern California

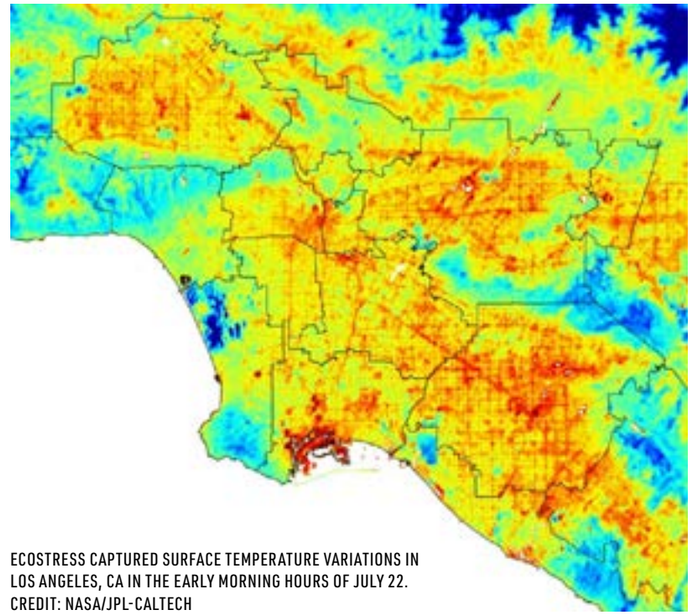
RESOURCE AND METHODOLOGY ASSESMENT

In irst half of 2020 at least six daily heat records were broken in Central and Southern California on Wednesday, including the hottest-ever Sept. 30 at Los Angeles International Airport (92 degrees) and Long Beach Airport (105). At the same time, eight of the 10 largest fires in California history have burned in the past decade and, this year, the August Complexfire became the largest fire in the state's history, burning a total of 1,032,648 acres or, about 1% of California's land, an area larger than the state of Rhode Island. These hazards go hand in hand with intensifying risk to public health, homes and displacement, energy availability, and economic disruption. The most vulnerable include seniors, communities of color, and outdoor laborers continue to be disproportionately impacted and bear the burden of the legacy of environmental injustice.

In 2019, CRCL supported the design and facilitation of the SCRI Wildfire Resilience Workshop in partnership with The Conrad N. Hilton Foundation and Resilient Cities Catalyst and with partners from Ventura County, LA County, TreePeople, and Climate Resolve. The workshopped surfaced ideas to pilot the world's most innovative solutions to fire and urban heat in the Los Angeles region. SCRI aims to strengthen the region's preparedness for wildfire and extreme heat as well as other climate threats. And because the impacts of wildfires and other climate threats are not confined to municipal boundaries, SCRI is working to foster coordination at the regional scale.

As a part of this effort, CRCL partnered with LA County to prepare "Heat Vulnerability in Los Angeles County Resource and Methodology Assessment." In support research and planning that advances resilience and climate adaptation planning around extreme heat. In the development of the County's OurCounty Sustainability Plan, the County established ambitious targets around converting heat trapping surfaces to cool or green surface, reducing the number of heat stress emergency department visits, and increasing the urban tree canopy cover. In addition, the County is pursuing a holistic climate vulnerability assessment. In service of these efforts, the Center for Resilient Cities and Landscapes assessed existing climate studies in the region and global best practices in order to inform the methodology used by the County in their broader climate adaptation planning effort.

CRCL looked across nine studies and tools that define and illustrate heat vulnerability in Los Angeles and Southern California — from State-wide climate projections prepared as a part of the Fourth Climate Assessment and Cal Adapt platform to visualization and mapping tools like the California Healthy Places Index and the California Heat Assessment Tool. Then, we evaluated them for their limitations and strengths in view of the targets set by the County in the OurCounty plan. CRCL also prepared case studies of global best practices in defining and studying heat vulnerability and prepared recommendations for the methodologies that the County might pursue in confirming, refining, and meeting the targets and actions identified in their planning efforts.



ECOSTRESS CAPTURED SURFACE TEMPERATURE VARIATIONS IN LOS ANGELES, CA IN THE EARLY MORNING HOURS OF JULY 22. CREDIT: NASA/JPL-CALTECH

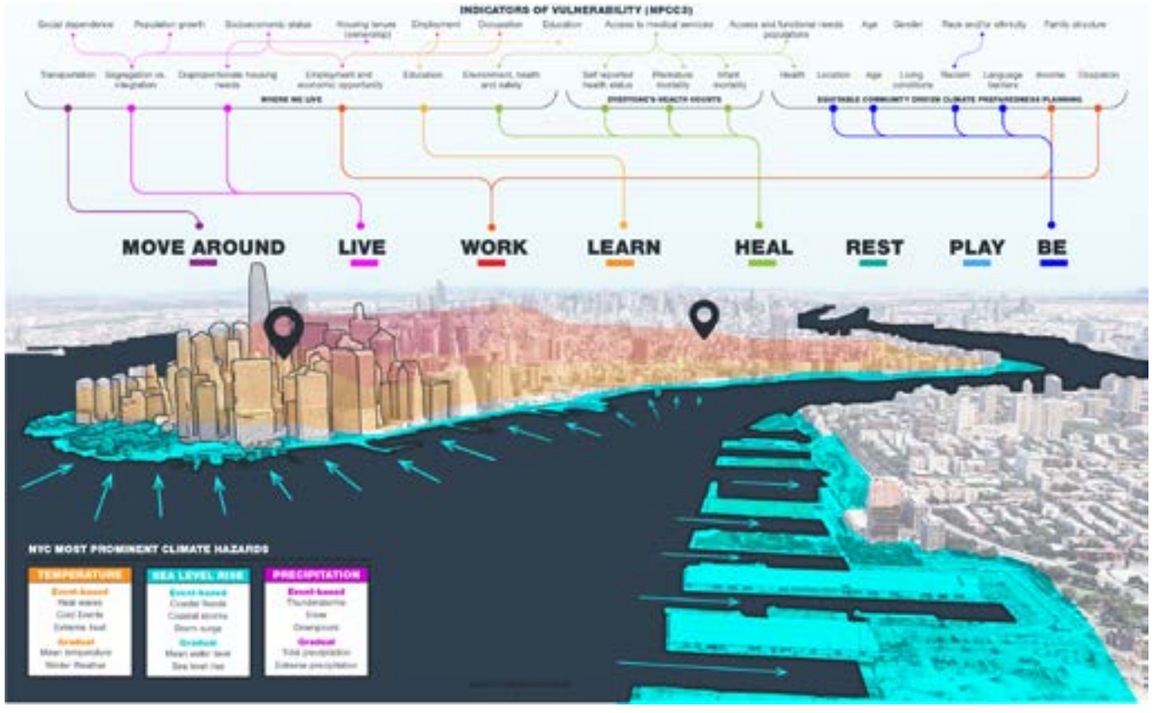
Climate Justice in Our Own Backyard

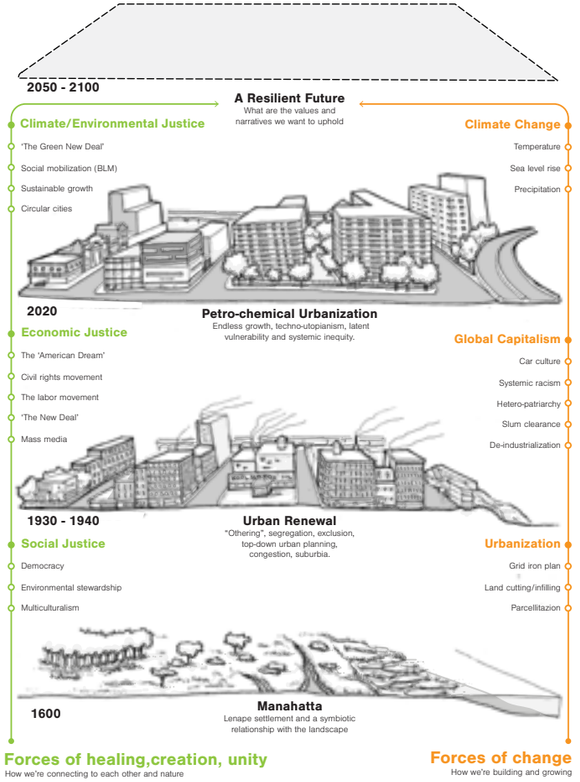
NYC'S CLIMATE ADAPTATION ROADMAP

The New York City Mayor's Office of Resiliency (MOR) is developing a Climate Adaptation Roadmap and has asked CRCL to create a visual communication tool that will guide conversations with communities, agencies, and other stakeholders. The communication tool will ground planning concepts and climate change projections in real and relatable geography. To kick off this engagement, CRCL reviewed existing MOR plan documentation against a number of comparable adaptation strategies developed worldwide, critically evaluating existing social vulnerability models. We recognized that vulnerability to the impacts of climate change has been systematically constructed by the status quo processes of urban development. These vulnerabilities can only be deconstructed by supporting the empowerment of marginalized voices in adaptation decision making and planning.

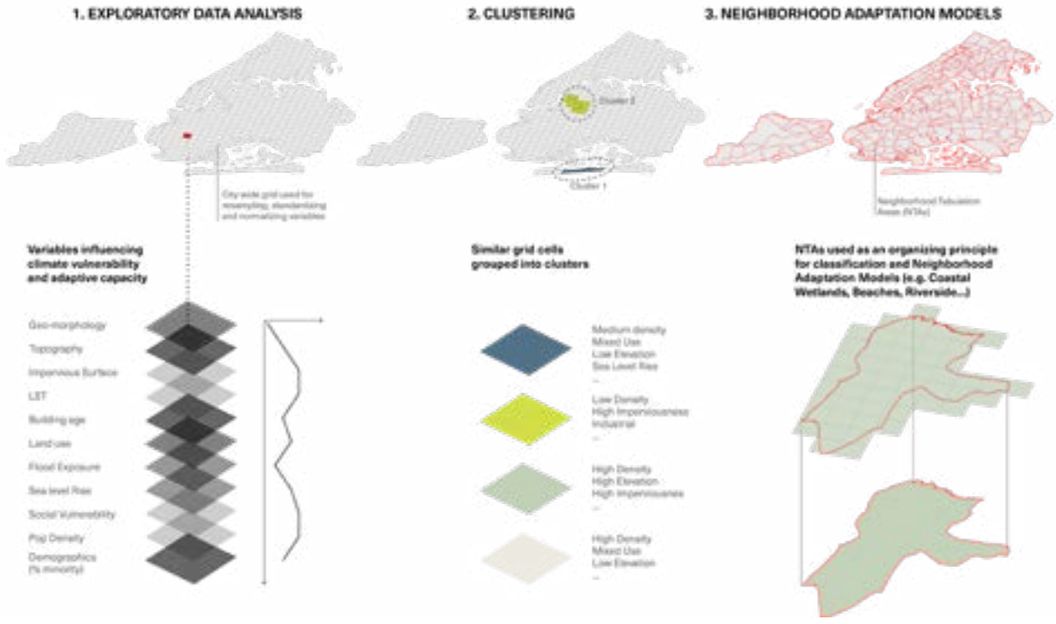
The second phase of building the Roadmap visualization tool--now underway--will begin with a data-driven study of New York City neighborhood types based on their biophysical and social vulnerability, and their capacity to adapt to environmental hazards. In contrast to prevailing examples of spatial classification that typically consider a very limited set of variables to establish discrete categories, this inquiry ties together social factors, spatial conditions, and geographic context underpinning the uneven distribution of climate change impacts across the city. These findings, along with the set of cartographic representations, will be compiled into an atlas of NYC Neighborhood Adaptation Models.

In keeping with the values we've laid out above, CRCL will integrate human experience and storytelling into the climate adaptation and justice dialogue and in New York City. We are interested in new modalities of engagement that not only create space for feedback and input, but also cultivate empathy towards vulnerabilities that register climate injustices in everyday human life and environment. As a first step, we will test the visual facilitation tool with the City and stakeholders. In addition to this, we will begin to test new modes made possible by journalistic and technological tools like virtual reality, photographic or audiographic documentation, and interactive mapping. We hope to be able to develop partnerships with activists, artists, and scholars and develop a scope of research and design work that can be made public through online or in-person exhibitions.





RESEARCH ILLUSTRATIONS BY SUMMER FELLOW JULIANA VELEZ DUQUE (LEFT AND RIGHT) AND GEOSPATIAL ANALYSIS CONCEPT BY GRGA BASIC (BELOW)



Resilience Design Corps

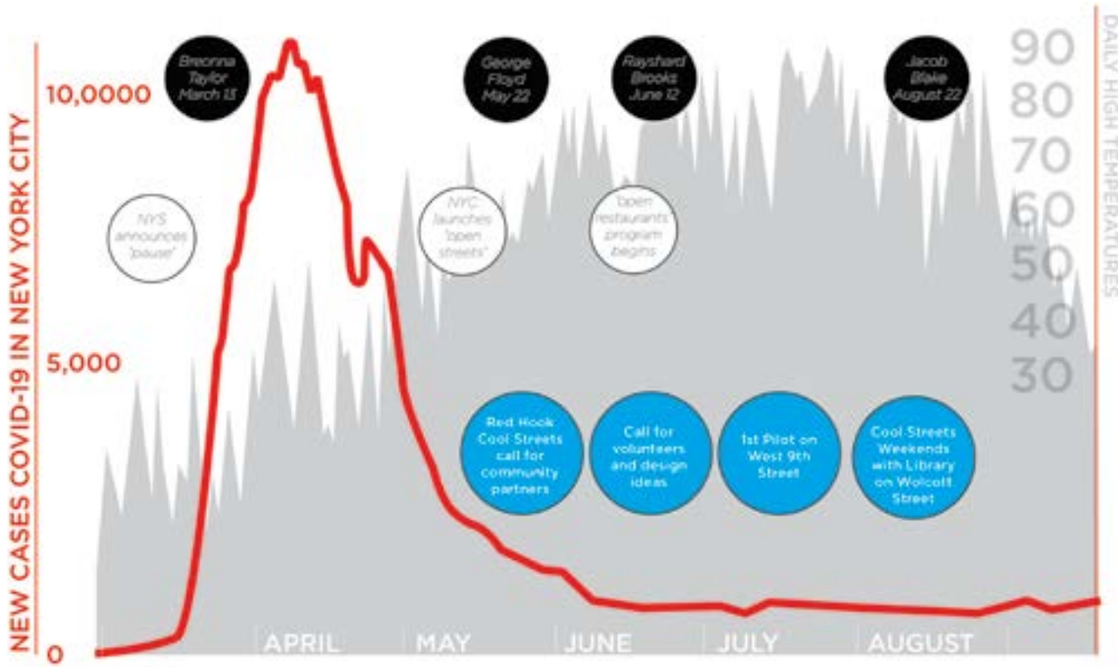
RED HOOK COOL STREETS

When facing a summer of extreme heat and hurricanes during the COVID-19 pandemic, we reached out to partners in New York City Government to assess how we could best support their on-going preparedness and response operations. It became immediately clear that those who needed help the most were community-based organizations serving vulnerable people on the frontlines of the epidemic. We also understood that communities of color, living in underserved and often environmentally contaminated areas, are disproportionately impacted by both COVID-19 and heat-related illnesses.

In response, the CRCL and the Resilient Cities Catalyst mobilized creative people to collaborate with community-based organizations in Red Hook Brooklyn to test socially-distance cooling measures in the public realm, with implementation funding support provided by the JM Kaplan Fund. We launched a Resilience Design Corps intended to be an evolving bench of artists, designers, planners, technologists, engineers, graphic designers and others. Through a series of community workshops and socially distanced walking tours, we began a dialogue about the future of Red Hook's public realm with heightened awareness for the care and protection of Black lives in the wake of the multiple police killings of 2020. Red Hook is a deeply segregated community and contains one of the city's largest public housing projects. Red Hook was flooded during Hurricane Sandy, and residents of the public housing have long suffered from exposure to mold and lead paint and disruption of basic utilities. As part of a FEMA flood resilience project, hundreds of large trees that have been growing since the houses were built in the 1940s were cut down recently, making the areas around the houses less shaded and increasing the risk of extreme heat this summer.

The Resilience Design Corps facilitated the creation of socially-distant cooling public spaces in Red Hook, Brooklyn by engaging designers and community organizations (The RETI Center, Red Hook Initiative, Resilient Red Hook, and the NY Public Library) in a design process that resulted in tactical urbanism projects implemented in August, 2020. This was a voluntary effort with the results shared in the public realm, informed lessons around how the design community can better serve communities most at-risk as well as around the marshaling of City and institutional resources and coordination. Through the effort, CRCL developed a website to host content and communications as the effort evolved in the form of precedent design content, research and reading materials, learnings from partners, and status updates on partnerships.

TIMELINE OF THE PANDEMIC SUMMER OF 2020



DESIGN VOLUNTEERS INSTALL COOL SHADING IN FRONT OF THE RED HOOK LIBRARY (LEFT) AND THE FIRE DEPARTMENT OPENS A HYDRANT IN FRONT OF THE RED HOOK INTIATIVE (BELOW)

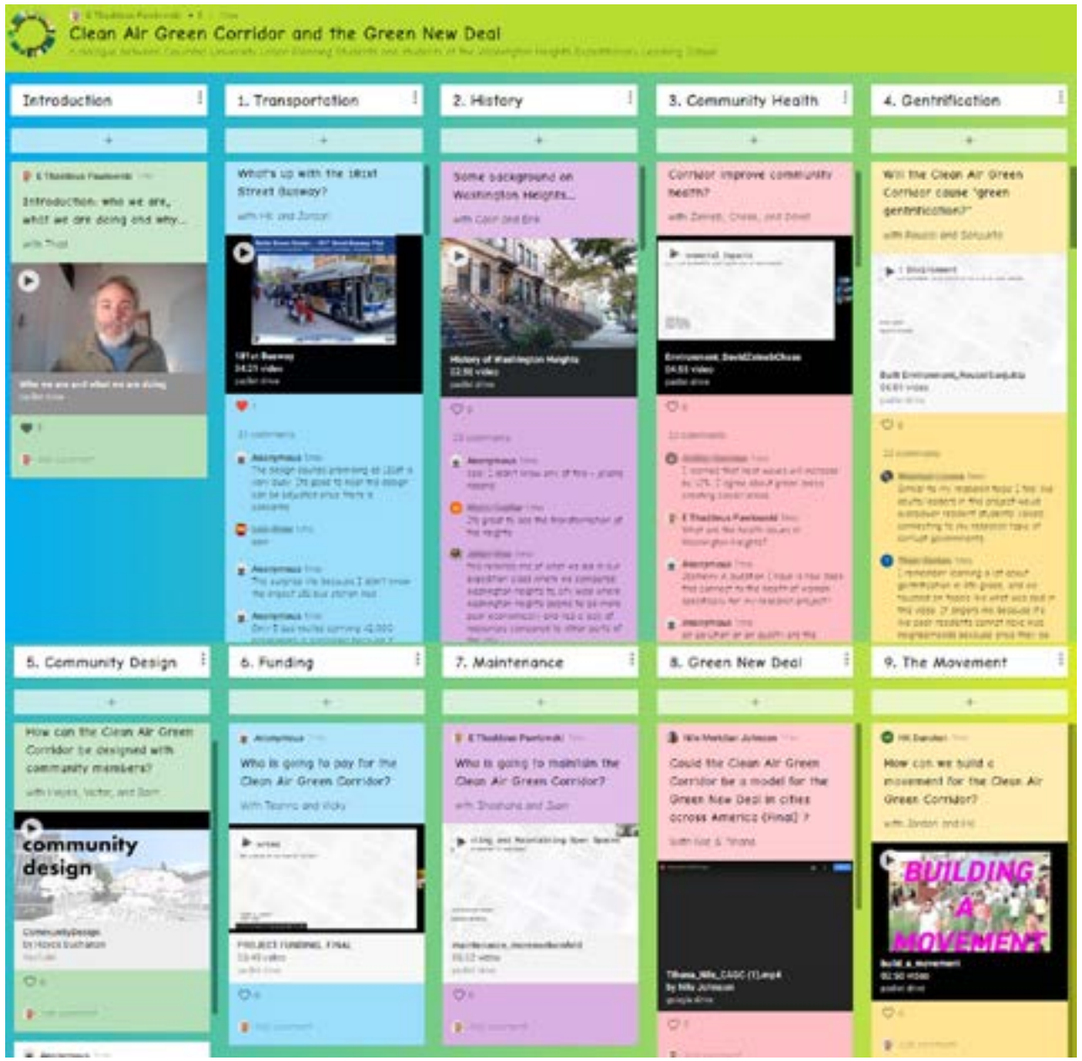
A Clean Air Green Corridor

WITH STUDENTS FROM WHEELS AND WeACT FOR ENVIRONMENTAL JUSTICE

Students from the Washington Heights Expeditionary Learning School (WHEELS) have conceived a plan to turn the street in front of their school, 182nd Street, into a "Clean Air Green Corridor." This project would create a new park and public space that would connect the many schools in the community and Highbridge Park. UNder the guidance of their teachers and partners at WeACT for Environmental JUstice, students have already taken their plan to the Community Board, Councilmember, and began further public engagement and pilot greening projects on their block.

To support their efforts, CRCL partnered with Friends of Wheels and WeACT on the delivery of the WHEELS Summer Environmental Justice Institute, a 2-week intensive workshop for students to refine and evolve the project idea. With support from our partners at NASA GISS, we conducted field work with the students to document the urban design conditions of the street as well as take thermal images of the site and survey various materials and conditions that influence urban heat island. At the end of the two weeks, students presented their project for public comment over zoom, and received feedback from practitioners, including faculty from GSAPP and City officials.

In the fall of 2020, we continued this work with a GSAPP Urban Planning Practicum: Resilience, Reparations and the Green New Deal: Climate Justice in Our Own Backyard. In addition to case study research and reading around environmental justice, graduate students worked with WHEELS students to consider the implementation of the project. The students co-developed research around community design, public health benefits of the project, how to avoid "green gentrification," how to coordinate with ongoing transit improvements like a busway on 182nd street. Through this work, we developed peer-to-peer learning relationships about environmental justice and resilience. In 2021 we will be continuing this work with our partners at WHEELS and WeACT, launching a pilot closing of the street in the summer.



WHEELS STUDENTS CONDUCTING URBAN DESIGN AND THERMAL COMFORT SURVEYS OF 182ND STREET (LEFT), VIDEOS MADE BY GSAPP STUDENTS AND DIALOGUE WITH WHEELS STUDENTS ON PADLET (ABOVE
DIAGRAM BY CRCL SHOWING DIFFERENCES IN AVERAGE SUMMER TEMPERATURES ACROSS WASHINGTON HEIGHTS (BELOW))

Resilience from Ridge to Reef

NEXT STEPS IN A GLOBAL COLLABORATION

The Resilient Reefs Initiative (RRI) is an effort led and implemented by the Great Barrier Reef Foundation with support from the BHP Billiton Foundation. Its mission is to bring together local communities, reef managers and global resilience experts across five World Heritage Reef sites to develop new solutions that combat the effects of climate change and local threats. Through the program, each site - Palau, Belize, the Great Barrier Reef, Ningaloo, and New Caledonia - will hire a Chief Resilience Officer (CRO) tasked with guiding an intensive stakeholder engagement process and delivering a Resilience Strategy and marshalling resources towards action (e.g., project, program, policy, and governance mechanisms) that address the values, vulnerabilities and aspirations identified in the Strategy.

In support of the RRI, the Center for Resilient Cities and Landscapes has been engaged as a Knowledge Network Partner and in the delivery of the Resilience Accelerator program to reef sites. To date, the CRCL participated in the Program Design Workshop in Airlie Beach (April, 2018), with all five reef sites and partners present, and have created a set of visualizations that communicate the complexity of risks and vulnerabilities facing reef ecosystems and communities. As we look forward to how best to support the initiative moving forward, we are scoping ways of delivering the breadth and enthusiasm of Columbia scholarship to support applications of reef-based research at the local level, support the specific and place-based research questions needed to advance strategies, and engage the RRI as a flagship partner in the ongoing development of the new Columbia Climate School.

A Climate Just Cities Network

PUSHING COLUMBIA'S ROLE IN ADVANCING CLIMATE JUSTICE

By Shannon Werle

On November 20, the Graduate School of Architecture, Planning, and Preservation (GSAPP) hosted Climate Justice and the City. The online event explored how racial and environmental equity can be meaningfully integrated into urban planning and design for climate resilience. The workshop was funded by a seed grant from the Office of the Provost's Addressing Racism initiative awarded to Christian Braneon, a scientist at the NASA Goddard Institute for Space Studies; Jacqueline Klopp, codirector of the Center for Sustainable Urban Development; and Thaddeus Pawlowski, managing director of GSAPP's Center for Resilient Cities and Landscapes.

The event marked the launch of the Environmental Justice and Climate Just Cities Network, a three-year project funded by the Earth Institute that aims to develop an online resource directory for Columbia Climate School's climate justice track. The project will also involve community-based organizations and support curriculum development.

Columbia's Core Climate Mission

"As Columbia builds the climate school," Klopp said, "we want to be sure we have environmental and climate justice at the core of this mission, and we want to be prepared with strong, respectful relationships with our partner communities and also with the curriculum."

"We want to acknowledge that academia's structural legacies of bias, and especially racism, have been barriers toward a just climate in the past," said GSAPP Professor Erica Avrami. "This network aspires to confront that structural system so that Columbia can be a more effective ally in this process toward just climate outcomes."

Local Leadership

Braneon then introduced two local leaders–Génesis Abreu, youth environmental program manager at Friends of WHEELS (Washington Heights Expeditionary Learning School), and Sonal Jessel, policy and advocacy coordinator at WE ACT for Environmental Justice–and asked them to speak about what challenges they felt should be prioritized in the struggle for environmental justice in New York City.

Both Abreu and Jessel emphasized that their priorities reflect the needs of the most vulnerable members of their northern Manhattan-based communities. Abreu's key issues were healthy housing, safe green open spaces, and climate resiliency amid increasing threats of extreme heat and flooding. Jessel discussed challenges faced by New York City Housing Authority residents, including both infrastructural and structural barriers that inhibit access to energy-efficient technologies. Aging cooling units, for example, are prone to overheating during extremely hot weather, leading to power outages.

A Tipping Point

Laurie Schoeman, senior program director of national initiatives for resilience at Enterprise Community Partners, spoke next. She said that the convergence of the affordable housing shortage and climate change has reached a tipping point, a problem further exacerbated by the lasting impacts of racially discriminatory policies such as redlining.

"The Federal Highway Administration created an incredible risk for communities because it essentially placed a huge amount of blacktop concrete through places like Black Bottom in Detroit and the South Bronx," said Schoeman, "which exposes these populations to extreme heat, flooding, and lack of stormwater management."

Youth Effecting Change

Following the panel discussion, participants were divided into breakout sessions led by Braneon, Klopp, Pawlowski, Avrami, and two other GSAPP professors, Reinhold Martin and Kate Orff.

The event concluded with a brief presentation by Mia Soto, a WHEELS high school student, on her work with the Clean Air Green Corridor initiative. Focusing on an area near her school–182nd Street between Amsterdam Avenue and Broadway–the initiative aims to introduce more vegetation to mitigate the urban heat island effect and improve access to Highbridge Park, a site long associated with homelessness, drug use, and waste dumping. Soto recognizes the importance of young people taking an active role in effecting change. "There is no reason," she said, "why our parks shouldn't be as beautiful as the other green spaces in New York City."

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