



Resilience Matters

Reimagining the Future in a Tumultuous Year



Edited by

Laurie Mazur

ABOUT THE URBAN RESILIENCE PROJECT

Over the last three decades, Island Press has published seminal works on resilience, ecosystems, and sustainable urban design. As our cities confront turbulent times, much depends on how resilience is defined and implemented. Seeing an opportunity to shape that outcome, Island Press launched the Urban Resilience Project in 2013, with the support of The JPB Foundation and The Kresge Foundation.

The project's goal is to advance a holistic, transformative approach to thinking and action on urban resilience in the era of climate change, an approach grounded in a commitment to sustainability and equity. We bring together leading thinkers with a broad range of expertise to generate and cross pollinate ideas. And we share those ideas in a variety of media—books, articles, interviews, webinars, podcasts, educational courses, and our annual compilation journal *Resilience Matters*.

For more information, and to find out how you can get involved, visit www.islandpress.org/URP



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AND ITS ENVIRONMENT PROGRAM

THE JPB FOUNDATION'S mission is to advance opportunity in the United States through transformational initiatives that empower those living in poverty, enrich and sustain our environment, and enable pioneering medical research.

The JPB Environment Program's goal is to enable resilient communities by enriching and supporting the environment because JPB believes it measurably impacts the health and well-being of our human and natural systems. JPB's Environment Program starts from exploring interventions in the metabolic flows or systems that make up a resilient community. These systems serve as hubs for our grantmaking across energy, green infrastructure, environmental health, and environmental justice.

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AND ITS ENVIRONMENT PROGRAM

THE KRESGE FOUNDATION is a private, national foundation that works to expand opportunities in America's cities through grant making and social investing in arts and culture, education, environment, health, human services, and community development, nationally and in Detroit, Memphis, and New Orleans. In collaboration with its partners, Kresge helps create pathways for people with low incomes to improve their life circumstances and join the economic mainstream.

Kresge's Environment Program helps cities combat and adapt to climate change while advancing racial and economic equity. The program's vision is that people in cities are protected from the short- and long-term impacts of climate change because their communities have transitioned to renewable energy, prepared for climate impacts, and elevated equity as a priority to ensure that everyone shares in the benefits. The foundation advocates that cities address climate change mitigation and adaptation concurrently; elevates the leadership, inclusion, and influence of people of color, people with low incomes, and equity-focused organizations in climate change-related decision-making; and builds the capacity of municipal staff, urban practitioners, and community leaders and fosters connections between and among them.

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Since 1984, the nonprofit organization Island Press has been stimulating, shaping, and communicating ideas that are essential for solving environmental problems worldwide. With more than 1,000 titles in print and some 30 new releases each year, we are the nation's leading publisher on environmental issues. We identify innovative thinkers and emerging trends in the environmental field. We work with world-renowned experts and authors to develop cross-disciplinary solutions to environmental challenges.

Island Press designs and executes educational campaigns in conjunction with our authors to communicate their critical messages in print, in person, and online using the latest technologies, innovative programs, and the media. Our goal is to reach targeted audiences—scientists, policymakers, environmental advocates, urban planners, the media, and concerned citizens—with information that can be used to create the framework for long-term ecological health and human well-being.

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Laurie Mazur

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INTRODUCTION

Reimagining the Future in a Tumultuous Year

LAURIE MAZUR

It was a year like no other: 2020 brought a deadly pandemic, crippling recession, protests against racial injustice, and bitter political division—all against a backdrop of unprecedented climate change impacts. As wildfires metastasized and meteorologists ran out of names for the unceasing hurricanes, 2020 tied with 2016 for the hottest year on record.

At the same time, we saw the skies clear over cities that are usually shrouded in pollution, along with a record-breaking (if temporary) drop in carbon emissions. We saw a long-overdue reckoning with systemic racism, including its ghastly toll in human life and its grotesque distortion of democracy.

However disturbing the reasons, 2020 was a year that ruptured expectations and forced us to step outside the rhythms of daily life. From this unfamiliar vantage point, we could imagine a different future. You could say 2020 was a “teachable moment”—a time to expose what is unsustainable and unjust, and to offer alternative visions. Contributors to the Urban Resilience Project, showcased in this volume, did just that.

As the pandemic gathered momentum, our contributors connected the dots among COVID-19, climate change and inequality. For example, Mustafa Santiago Ali showed how those who are most vulnerable to COVID are also hit hardest by climate change (page 149). Katherine Eglund and Rev. Lennox Yearwood warned that supercharged hurricanes would compound the ravages of COVID in Black communities (page 14). And Cate Mingoya observed that green space is even more important in a pandemic, while exploring the racist history behind its absence in some neighborhoods (page 155).

By making these connections, our authors drew back the curtain on exploitative systems that threaten both people and the planet. But, while the problems are connected, the solutions are, too. That’s why Cassandra Breeze-Ceballos and Elizabeth Sawin call for a “multisolving” approach that uses pandemic recovery funds to catalyze a “just transition” away from fossil fuels (page 193). Calvin Gladney takes a similar tack, seeing the recovery as an opportunity to rethink our car-centric way of life (page 166).

In these pages, you’ll find plenty of alternatives to the unsustainable, inequitable status quo. Daniel Parolek shows how “missing middle” housing can make our cities more livable and affordable (page 125). Daniel Imhoff proposes turning the Midwest corn belt into a “carbon belt,” with plantings that preserve soil and sequester carbon dioxide (page 59). And Bruce Rich offers up the Basque country of Spain—“one of the most internationally competitive, socially inclusive, environmentally progressive economies in the world”—as a model for capitalism 2.0 (page 72).

Here, too, you’ll find real-life strategies for tackling climate change and inequality together. One comes from Miami, a climate-vulnerable city where more than half of residents are one disaster away from insolvency. Tiffany Ganthier tells the story of Catalyst Miami, a community group that is helping vulnerable families boost their financial resilience with matched savings accounts and lending circles (page 106).

What will it take to spur the transformative changes we need? The mainstream environmental movement must first reckon with its racist past—and present. That means doing more than simply “checking the box” on diversity, explains Andrés Jimenez (page 52). Transformation requires antiracist and feminist leadership at all levels, writes Jennie Stephens (page 48). And, as Shamar Bibbins observes, it requires philanthropy to trust—and invest in—frontline groups led by people of color (page 20).

Fundamentally, this moment calls us to rethink “resilience,” writes Jalonne White-Newsome (page 175): “Resilience must mean more than enduring the unendurable, or bouncing back to “normal,” she writes. We must instead *bounce forward* to a fairer, greener future.

Today, there is hope. As 2020 drew to a close, voters turned out in record numbers to oust a president who denied climate change and called white supremacists “very fine people.” The Biden-Harris administration

has put climate change and racial justice at the top of the agenda—and early actions and appointments bear that out.

As we turn the page on a traumatic year, there is much we might want to forget: George Floyd's last words; hospitals and morgues filled to capacity; snaking lines of cars at food banks; the orange, smoke-filled skies over San Francisco. But the lessons of 2020 are too important to be forgotten. The year's colliding crises revealed the interconnections among the great social, health and environmental challenges of our time, and illuminated a path forward.

On the eve of his inauguration, President Biden said, "To heal, we must remember." Let us hope for a year of remembrance, healing, and transformative change.

SECTION I

**CLIMATE ADAPTATION,
CLIMATE JUSTICE**

Climate Justice in Frontline Communities: Here's How to (Really) Help

KATHERINE EGLAND AND HILTON KELLEY

Originally published March 24, 2020 in The Hill

As global warming accelerates, there's a push by environmental groups and philanthropic foundations to engage with communities on the frontlines of the climate crisis. We are long-time activists from those communities, and we welcome the reinforcements. But we also have thoughts on how to make sure that well-meaning efforts to help are actually helpful.

Low-income communities and communities of color are particularly vulnerable to the impacts of global warming. Research shows that low-income people are more likely to live in flood-prone areas, and are less likely to receive federal aid once flooded. Abandoned by politicians and government, we need support from the philanthropic sector and nonprofits to build equitable climate resilience.

There's another reason for engaging frontline communities: This is how we win on climate. Global warming is a crisis, and we can't rely on environmental nonprofits alone to tackle it. By combining the resources of national organizations with the experience and knowledge of those most impacted—low-income people, African Americans, Latinos and First Nations—we can build a diverse and powerful coalition for climate justice.

But frontline communities and their leaders, especially those of color, have learned to be wary of outside assistance. Based on our experiences living and working in these communities, here's our advice on how to (really) help:

1. We need power and adequate funding

The most common criticism of environmental nonprofits and foundations is that they swoop down into communities to run an event or offer an

insufficient grant and swoop back out. The event or grant is offered on their terms, and the community is expected to be grateful. We can do better. Working with frontline communities requires a genuine partnership where the community leads the process, has access to the experts and the funds to cover their costs.

2. We welcome your authority, knowledge and resources

But climate isn't the only reason we are seeing more floods. Ill-conceived development, especially in flood-prone areas, replaces water-absorbing forests and wetlands with impermeable surfaces—so there is simply nowhere for all that water to go. While the risks of building in a floodplain may seem obvious, such construction continues nonetheless—in part because waterfront properties are in high demand, commanding premium prices that boost real estate tax income for local governments.

3. Helping means staying

One of the leaders in Higher Ground has been working solidly for three years as a full-time volunteer to protect a wetland from development. An environmental organization offered to help. They did some graphics, sent some tweets (without mentioning the name of the community leader), got some glory and disappeared. This is one of many reasons why frontline communities feel aggrieved. Our fight is long. We need you to stick with us, through our successes and failures, and we need you to elevate our voices.

4. It's not our profession

The people we work with are suffering from the impacts of climate change—some have lost their homes, livelihoods and assets as a consequence. And we face a constant barrage of environmental injustices. One of us (Hilton) lives in Port Arthur, Texas, home to the nation's largest oil refinery—and some of the highest levels of toxic air releases in the country. Asthma and cancer rates in the predominantly African-American West Side are among the highest in the state. Our neighbors have jobs and families to care for, many are elderly. They care deeply about their environment, but it's not their profession. We need to engage them with thought and care—put food on the table, offer childcare, and host events at times and places that work for them.

5. We are experts

We aren't scientists or experts on resilience, and we welcome and need technical assistance. But we are experts on our community and how the

impacts of climate change are playing out. We can show you the watermarks of flooding and point to where the floodwaters spill over. We can share the stories of neighbors who escaped. We also know that building resilience is as much about social and environmental assets as it is about science, and we know who and what those assets are.

6. Ditch (most of) the tool kits

Guidance documents, best-practice case studies and tool kits may work well for city governments, but they aren't for us—except when they are developed by us. Please come directly to our community, meet with our people, let us show you what we know, and then share your knowledge and resources with us.

7. We are environmental activists

There's a false belief that people of color and low-income Americans don't care about the environment or climate change and that someone must persuade us to care. Research (and our own experience) shows otherwise. We don't need a lesson on why we should care; we need solutions.

8. Accept conflict

We like to partner with our cities and counties, truly we do, but sometimes their hunger for development dollars and neglect for our concerns means that first we have to fight them. Climate justice is political, and we need partners willing to accept politics and conflict.

9. Don't lead with retreat

Some people say, "If you're flooding, why don't you just move?" We recognize the vulnerability of our communities to climate change, sea-level rise, and urban flooding. We know that some neighborhoods will have to move. But first we must spend time building trust. Research shows that government is quick to armor the homes of wealthier communities while declaring poor neighborhoods unsalvageable. (See, for example, post-Katrina New Orleans.) We support managed retreat as Plan B, but first we have to explore Plan A.

Those of us who live in—and fight for—frontline communities welcome assistance in the form of resources and expertise. But the best way to help us isn't by "helping"—it's by seeing us as equal partners and allies in the struggle for climate justice.

This Foundation Takes a Unique Approach to Climate Philanthropy—and Gets Results

LAURIE MAZUR

Originally published April 20, 2020 in Inside Philanthropy

As the saying goes, “When white folks catch a cold, black folks get pneumonia.” Centuries of racist policy and practice mean that people of color are hit first and worst in every crisis. That’s true of the COVID-19 pandemic, which is disproportionately killing African Americans. And it is true of the ongoing crisis of climate change.

Consider this: Neighborhoods scarred by racist redlining practices are nearly five degrees hotter, on average, than their whiter, wealthier counterparts. As a result, those communities are literal hotspots for the urban heat island effect—the deadliest climate impact.

Environmental funders are increasingly aware of the need for a more equitable response to climate change. And in impacted communities across the U.S., local groups—often led by people of color—are tackling the twin challenges of climate and equity. But for the most part, philanthropic dollars are not reaching those frontline groups. Today, about half of climate funding goes to just 20 national organizations, which are overwhelmingly led by white men.

The Kresge Foundation’s Environment Program is an exception. In 2014, Kresge launched the Climate Resilience and Urban Opportunity (CRUO) initiative, a five-year, \$29 million effort that prioritized work led by advocates and organizers in frontline communities.

“We wanted to address the historic disinvestment in community-based organizations,” says Shamar Bibbins, a senior program officer at Kresge who led the CRUO grantmaking. “Our question was, what would look

different if we provided significant, sustained funding to help those groups deepen their influence, leadership and capacity around climate change?”

A Path to Victories on Climate

The answer to that question is now coming into view. A recent evaluation of CRUO, conducted by Spark Policy Institute and Ross Strategic, affirms the value of Kresge’s approach. CRUO grantees scored impressive policy wins in their communities, regions and states. Collectively, they built a broader coalition and helped shift thinking about climate resilience

Importantly, the CRUO grantees showed that investing in frontline communities is a path to victories on climate: “At a time when the U.S. has abandoned global efforts on climate change and there is either paralysis or attacks on environment at the federal level, this grantmaking strategy is working and winning,” says Rachel Leon, executive director of the Environmental Grantmakers Association (EGA).

There are several reasons for climate funders’ neglect of frontline communities. First, in the mid-2000s, many of those funders aligned with the Design to Win strategy, a policy agenda focused on reducing greenhouse gas emissions. That strategy called for technically focused, market-based solutions, establishing funding patterns that remain despite diminished prospects for such policy changes at a national scale.

Also, “There was a perception that highly local work couldn’t add up fast enough,” says Lois R. DeBacker, managing director of Kresge’s Environment Program. “And the reality is that it’s difficult to get money to small organizations—it’s not easy to give away \$18 million in \$10K grants.”

There is sometimes a misalignment of scope: “Frontline community groups are often multi-issue, as they should be,” says Leon. “But historically, philanthropy has focused on very specific goals and metrics.” And funders question the capacity of local groups. But that is a “chicken-and-egg” question, says Leon, because foundation support would bolster local groups’ capacity.

More insidiously, grantmaking decisions are shaped by the less-than-inclusive culture of environmental philanthropy. “We hire people and they bring with them certain networks,” says DeBacker, “Many environmental grantmakers are white, and that influences the networks they have and

know. And we have mental models of who we view as experts, those we go to for advice—and that creates unintentional, but actual, bias.”

Flipping the Frame

Given those realities, Kresge’s approach was to “flip the frame” of their climate investments, says Bibbins. That meant changing assumptions, strategies and even the foundation’s culture of grantmaking.

As part of a foundation-wide pivot toward expanding opportunities in America’s cities, Kresge’s environment program was charged with developing a climate strategy that prioritized the interests of low-income urban communities of color. “So rather than funding mainstream environmental groups, hoping that they would strengthen their competency around equity, we decided to fund groups whose work was already grounded in equity, to deepen their engagement on climate,” says DeBacker.

CRUO’s grantmaking was divided into two phases. Nine-month planning grants enabled Kresge staff to work with a cohort of grantees as they devised strategies and identified areas for capacity building. Then, in the implementation phase, Kresge funded 15 of the 17 community groups from the planning cohort, focusing on those with the greatest likelihood of success.

Throughout both phases, Kresge worked to remain flexible and adaptive, allowing grantees to respond to changing conditions. This was particularly important after the 2016 election, which presented many grantees with urgent community needs and new political realities. That adaptive approach was supported by dialog with an external advisory committee and grantees, as well as other supports such as peer-learning funds that fostered learning and engagement across the climate-resilience field.

Community building and technical assistance were baked in from the start. In addition to support for local groups, CRUO made grants to a handful of national “field-building” organizations, including the Center for American Progress and EcoAdapt. And Kresge supported various mechanisms—annual convenings, peer-to-peer learning and special-issue convenings—that enabled those groups to learn from one another.

Those connections proved transformational on both ends. Frontline groups got access to the resources of national organizations; the national

groups got schooled on the equity challenges facing local groups. As one field-building grantee told the CRUO evaluators, “We’ve learned tremendously from the first-hand experiences of place-based [organizations]... This knowledge has helped us to craft meaningful policy recommendations that policymakers and local advocates support.”

Kresge also took on what Green 2.0 has called “an overwhelmingly white ‘Green Insiders’ club” by hiring diverse, culturally competent staff. “We’ve hired people, like Shamar [Bibbins], who have really strong commitments to equity, and who have a lived experience of understanding how racism plays out,” says DeBacker. “The intensity of a commitment to equity, and the sense of urgency around it, is stronger for those who have lived it up close and personal.”

A Growing Record of Wins

Together, these approaches led to significant policy wins. In Portland, for example, several CRUO grantees (Coalition of Communities of Color, OPAL Environmental Justice Oregon, Native American Youth and Family Center) helped secure passage of the Portland Clean Energy Fund. The fund imposes a surcharge on retailers with over \$1 billion in annual sales, generating \$30 million a year for clean energy projects, job training, local food production, and green infrastructure. Crucially, the fund directs resources to Portlanders who are impacted by climate change but historically excluded from the emerging low-carbon economy.

In Fresno, California, the Leadership Counsel for Justice and Accountability worked with partners to redirect state climate funds to under-invested neighborhoods in West Fresno and secured new statewide guidelines that require community engagement and support in allocating those funds. In Miami, Florida, Catalyst Miami pushed city officials to ensure that the \$400 million Miami Forever Bond includes a Citizens Oversight Board that represents the interests of the community and has a say in how bond money is allocated.

As frontline groups secure policy wins, they are producing tectonic shifts in thinking about the climate movement. “The grantees really forced us to expand our vision of what constitutes climate work, because they are coming at the work from such a holistic, intersectional approach,” says Bibbins.

That expansive vision has been embraced by other funders, notably the JPB Foundation, which supports the Institute for Sustainable Communities' Partnership for Resilient Communities. Leon, of EGA, says that support for environmental justice issues among her group's members has been steadily rising for the last few years.

Fundamentally, the CRUO initiative showed the value of investment in frontline communities—not only because those communities are most vulnerable in a warming world. Frontline groups bring invaluable assets to the climate fight—including trusted leaders, deep knowledge of local conditions and history, and hard-won experience fighting against inequity. Paired with philanthropic resources, frontline groups are poised to win on the entwined challenges of climate change and inequity.

The Next Disaster for Black Communities

KATHERINE EGLAND AND REV. LENNOX YEARWOOD JR.

Originally published June 24, 2020 in The Hill

Black Americans are reeling from the last few months—and the last 400 years.

We are heartbroken and enraged by the killings of Breonna Taylor, George Floyd, Tony McDade and Rayshard Brooks—the latest manifestations of racist violence we’ve endured for centuries. At the same time, the coronavirus is decimating our communities, with Black people three and a half times more likely to die from COVID-19 than whites. We are among those hardest hit by wage and job losses during the pandemic.

Next up is a potentially devastating hurricane season. A warmer planet has made hurricanes more intense and destructive. This year is predicted to bring more storms than usual; we’ve already seen three.

Black communities are in the crosshairs of these supercharged storms. Because of racist housing policies and planning regimes, we often live in low-lying areas that are more likely to flood. As Gulf Coast natives, we’ve both experienced these impacts firsthand. We lost longtime friends and suffered our own property damage from the floodwaters, and worked on response and recovery when the government failed. Those same communities are still recovering from Katrina, while facing ongoing police violence and, now, the coronavirus pandemic.

Our nation is not prepared for the unprecedented challenge of a major hurricane during a pandemic and its outsized impact on Black communities. The complexity of this challenge calls for more resources, not less. However, a recent FEMA document says, “many aspects of disaster response may be conducted remotely this year,” and the agency plans to use smaller staging teams, signaling that it will leave the hands-on

work to the states. But the states, gutted by pandemic and recession, are ill-prepared to take the lead.

For Black communities, who are already overlooked and under-resourced, an inadequate response could prove disastrous. We can't stop hurricanes from coming (though addressing the climate crisis would keep them from becoming even more destructive), but we can make sure that disaster response is effective and fair.

First, we need to up our game on preparedness, especially in vulnerable communities. This makes fiscal sense: every dollar invested in disaster prevention—elevating homes at risk of flooding, managing stormwater with “green infrastructure”—saves \$6 for every \$1 spent on hazard mitigation. FEMA's Building Resilient Communities and Infrastructure (BRIC) program is a good start, but to have more impact it must prioritize low-income and Black communities.

Next, we need to rethink disaster assistance. The process of applying for assistance is absurdly complex. It's also riddled with discriminatory clauses that shut out renters and people who don't have a clear title to their homes. As a result, affluent whites receive more federal dollars after disasters than do people of color and poor people. We need to make the application process simpler and more transparent. If FEMA “calls it in” with virtual disaster response, it must provide targeted assistance to poor and rural communities on the other side of the digital divide.

We need more local involvement in disaster planning and response, especially in Black neighborhoods where fear and distrust of government is the norm. Today, cities are reimagining public safety by diverting funds from policing to investing directly in communities. Similarly, we could invest in prevention and recovery at the local level. Trusted community groups are in the best position to get resources where they are needed most. Also, by enforcing the requirement to hire local firms for cleanup and repair, we can jumpstart the economic recovery in hard-hit areas.

Instead of FEMA, we need “PEMA,” a People's Emergency Management Agency.

Finally, we need to build back better, not just back to “normal.” In a country torn by racial and economic inequity, facing a global pandemic

and climate calamity, normal is not good enough. When disasters strike, we must rebuild in ways that eradicate systemic segregation and strive for educational and economic parity for people of color. We must ditch our deadly dependence on fossil fuels and rebuild communities that are greener, healthier, climate-resilient and sustainable.

In the last few months, we've seen what happens when decision makers fail to heed the warnings of scientists and health experts, and when they fail to hear their own people calling for change. Today, a new danger looms: climate change-driven hurricanes—on top of pandemic—threatening to devastate Black communities reeling from centuries of racist policies and practices. This is a predictable, preventable crisis, and we must mobilize to stop it now.

A Neglected Environmental Justice Issue: Indoor Plumbing

DAVID F. COURSEN

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It's 2020 in one of the world's wealthiest nations, yet some 2 million rural Americans lack access to adequate plumbing or sanitation—the running water and flushing toilets that most of us take for granted as essential to a decent life. Millions more are unable to obtain, or afford, clean drinking water.

Amid a national reckoning on race, we've seen new attention paid to environmental justice issues. Low-income communities and people of color are more likely to live in the shadow of power plants and other polluting facilities; they are also hit first and worst by the floods and heat waves of a changing climate. Access to clean water and sanitation is also a crucial environmental justice issue, but it is neglected in current policy and funding.

This year's House EPA appropriation, which the Senate will surely reject as too “generous,” does little more than nod in the right direction. It includes a provision authorizing \$13 billion in “emergency” funding for EPA without even mentioning environmental justice. It adds nothing to two paltry environmental justice grant programs that currently limit funding for our nation's thousands of overburdened communities to \$2.1 million. The House bill continues funding for a pair of existing federal programs that provide grants for basic drinking water and sanitation infrastructure—but those programs are far too limited to address the problem.

The problem is most urgent for communities of color. A report by DigDeep and the U.S. Water Alliance found that Native American households are 19 times as likely as white households to lack full plumbing; African-Americans and Latinos are twice as likely. Not surprisingly, those

same communities suffer disproportionately from coronavirus. Infectious diseases thrive where handwashing is difficult.

In the Navajo Nation, the largest reservation in the U.S., nearly a third of the population—100,000 people—lack adequate water facilities. The Washington Post reports that “counties containing Indian reservations have astonishingly high percentages of households without plumbing.” Sanitation and water problems also persist in the U.S.-Mexico border region, in rural areas in southwest Alabama and in parts of Appalachia such as Eastern Kentucky and Western Virginia, and elsewhere.

Children in those places play in yards that flood with raw sewage and wastewater. Families drive for hours to fill barrels with household water or carry containers to public taps; some draw water from contaminated streams or springs. It is scarcely surprising that some observers compare conditions in parts of rural America to those in the developing world.

Worse, a lack of indoor plumbing is only part of the problem. The number of people with nominal access to community water but who cannot afford it because user fees are too high is much larger than two million. For some, there may be no safe option at all: when the well water in Martin County, Ky., became brown and salty, the only alternative was to pay skyrocketing user rates for water from a dilapidated community system that sometimes delivers water that is discolored, smells like bleach, and makes children itch after bathing. More than 44 million people are served by water systems that have recently violated Safe Drinking Water Act water quality requirements.

There are also widespread problems with well water. Nearly a quarter of the private wells tested by one federal agency contained water with unhealthy contaminants like arsenic, uranium, nitrates and E-coli; one out of six people in rural areas have experienced issues with safe drinking water and one out of eight report issues with their sewage system.

Our nation has made great progress in building water infrastructure—facilities to store and distribute drinking water and to treat wastewater. In 1950, one in four U.S. households did not have flush toilets. Since 1973, EPA programs have provided more than \$120 billion to fund wastewater and drinking water infrastructure. But that funding has declined to about a seventh of what it was in the 1970s. The communities left behind must

compete for a share of the reduced funding. Moreover, that funding is not given in grants, but as loans that require repayments that can be crippling for small communities.

A pair of EPA programs point the way to addressing the problem. Last year, EPA provided \$54 million in grants for basic drinking water and sanitation in Alaskan villages and desperately poor U.S. communities along the Mexican border. Since 1996, the Alaska program has funded sustainable and affordable in-home water and sanitation services, raising the share of that state's communities with indoor plumbing from 50 percent to nearly 95 percent. The border program has funded safe drinking water for 70,000 homes and wastewater collection and treatment services to 673,000.

These successful programs—though limited in scope and funding—show what can be done. It is time to provide the same type of funding to all of the communities in the U.S. that lack access to clean water and sanitation. Environmental justice requires that low-income, rural communities and people of color enjoy that right as fully as the rest of our nation's people.

How Philanthropy Can Meet the Moment: The Vital Importance of Trust

SHAMAR BIBBINS

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You've heard the saying, "Change moves at the speed of trust." In the climate movement, we have serious trust issues. Frontline, community-based organizations—often with leaders who are Black, Indigenous, and people of color (BIPOC)—are at the forefront of movements on climate, racial justice, and more. But too often, funders do not trust these groups with the resources they need. And this limits our ability to achieve transformative change.

As a Black woman who cares about the environment, humanity, and the healing of all people, my work at the intersection of social justice, racial equity, and environmental protection has never been easy. I have fought enough battles to understand that change takes time, but I am at a breaking point.

I am frustrated, saddened, and increasingly impatient with the pace of change—and with the lack of trust that holds us back.

Most climate victories have been won with BIPOC-led frontline groups at the center. We simply cannot succeed without the authentic leadership of these groups. And yet, about half of philanthropic funding on climate issues goes to 20 national organizations, 90 percent of which are led by white people, 80 percent by men.

It's not just climate. Frontline groups are responding in real time to many of the most urgent issues facing our communities. And, while women of color are the backbone of frontline groups, only 0.6 percent of US philanthropic dollars go to women-of-color-led organizations. Overall, organizations led by people of color receive less grant money, with more strings attached, than white-led groups.

Why?

The historical and systemic racism that infects every part of our society is certainly to blame. Despite countervailing evidence, many funders do not trust BIPOC leaders to be strategic problem solvers in their own communities. Too often, funders take a top-down approach that centers technical expertise, misdiagnosing the root of the problem, and creating narrow solutions that diminish community voice and leadership.

If we want to take on the crucial issues of our time, funders need to trust—and support—frontline leadership.

The ecosystem of change

Change looks different on the frontlines. Rather than focusing on a single issue—climate change, say, or housing—frontline groups confront multiple problems at once. They take a holistic, “ecosystem” approach that acknowledges connections among issues like racism, climate impacts, and health disparities.

Because they are rooted in the community, frontline groups respond quickly to emergent concerns. Consider PUSH Buffalo, a community organization in Buffalo, New York, that works on affordable housing, energy efficiency, and job training. When COVID-19 hit, PUSH met the moment. Street teams already in place to educate neighbors about free energy-efficiency upgrades helped deliver groceries and medical supplies. Existing grants for affordable housing were redirected to rent relief. And School 77, an abandoned campus that PUSH renovated and converted to solar-powered affordable housing, became a mutual aid hub. These solutions were launched as soon as the crisis hit, weeks before Congress passed its first stimulus bill.

In California’s Bay Area, the Asian Pacific Environmental Network (APEN) also pivoted, preventing evictions and utility shutoffs, providing PPE (personal protective equipment) to essential workers, and organizing protests against police violence. Like most frontline groups, APEN keeps its eyes on the long-term prize while responding to immediate needs. “We know we need to transition away from an extractive economy based on profit and pollution,” says APEN executive director Miya Yoshitani. And, because APEN works in communities that are economically dependent on fossil fuels, “we need to do it in a way that centers the people who are

most impacted.” That’s why APEN is working to build locally controlled clean energy resources and strengthening the social safety net for workers and residents.

Meeting community needs is the key to truly transformative change, says Nathaniel Smith, founder and chief equity officer of the Partnership for Southern Equity. “Revolutions are usually seeded and supported by the folks who are suffering the most. But the people who are suffering aren’t usually the ones that design or create the theories of change,” says Smith. “Why is that? It’s not because they’re not brilliant or because they don’t have the answer. It’s because they are hungry.”

The Partnership is working with neighbors suffering from the current crisis, launching a COVID-19 fund to support basic needs, and leading a campaign to prevent utility shutoffs. “By ensuring that people are in the position to feed their families, that they have shelter, that their utilities are on, we give them a chance to think bigger than just about survival,” says Smith.

In addition to seeing the connections between immediate needs and long-term transformation, many frontline groups see themselves as connected to a larger movement. Take, for example, Black Visions Collective, a Minneapolis-based community group. In the aftermath of George Floyd’s murder, Black Visions held trainings for medics and protesters, hosted marches and meetings, and organized mutual aid efforts. This work caught the attention of media, and donations poured in. But Black Visions’ staff were not aiming to build a large, well-heeled organization. “We see ourselves as a part of a larger ecosystem of organizing,” they explained in a letter to supporters. So they urged potential donors to give money to other underfunded groups, instead. Now, they are working to give away some \$200,000 to a broad range of allied projects and groups.

This is how we win

Working from a carefully built foundation of trust, BIPOC-led frontline groups punch above their weight.

In the state of New York, frontline groups—including PUSH Buffalo, ALIGN (Alliance for a Greater New York) and the New York City Environmental Justice Alliance—were central to the passage of the 2019 Climate Leadership and Community Protection Act. Widely hailed, the

Act calls for the state to get 70 percent of its electricity from renewables by 2030, and to go carbon-free by 2040. Frontline groups won important environmental justice provisions, including a target for disadvantaged communities to receive 40 percent of the benefits from state climate programs.

And in Portland, Oregon, BIPOC-led community groups prevailed when voters resoundingly approved a measure to create the Clean Energy Fund in November 2018. The fund imposes a surcharge on retailers with more than \$1 billion in annual sales, generating \$30 million a year for renewable energy, job training, local food production, and green infrastructure. The fund directs resources to Portlanders impacted by climate change but excluded from the emerging low-carbon economy.

Even when high-profile policy victories remain elusive, organizing and movement-building can prove transformative. Two years ago, in the state of Washington, frontline communities of color came together with labor, environmentalists, public health leaders, and others to draft a carbon tax initiative. “It was the largest and most diverse coalition that had ever come together on climate,” says Aiko Schaefer, former director of Front and Centered, “and it produced the most groundbreaking, most innovative policy proposal.”

Although the ballot initiative was defeated (after unprecedented spending by fossil fuel interests), that coalition has changed the conversation about climate in Washington and beyond—from a technocratic approach centered on reducing emissions, to a more reparative focus on helping impacted communities. As a result, when Governor Jay Inslee (D) signed a bill the following year that requires 100-percent renewable energy by 2045, the coalition won provisions that ensure equitable benefits for low-income households.

Funders: Follow the frontline leaders

There are many reasons for the success of frontline groups and coalitions. First, their holistic approach aligns with people’s lived experience. Most of us care about more than one issue; we want good jobs *and* a livable planet, for example. That’s even truer for those living with the compounding, intersectional harms of racism, poverty, and environmental injustice. Community-led problem-solving is tailored to the local context and garners more buy-in. And the “ecosystem” approach enables community

groups to broaden their base of support, nurture reciprocal relationships, and build a stronger, more adaptable movement ecosystem.

Unfortunately, these approaches put frontline groups at odds with prevailing philanthropic culture. Foundations typically segment giving by issue—for example, viewing climate change, poverty, and health as separate concerns. Even when they are seen as intersecting issues, funding priorities most often are not aligned to support a holistic, multi-issue frame. Moreover, most funding comes in the form of support for specific projects. This leaves community groups with little financial flexibility.

I entered the field of climate philanthropy in 2014, and I am pleased to say that a lot has changed since then. There is greater awareness, at least, that the environmental movement has a problem with diversity, equity, and inclusion, resulting in notable shifts among climate funders and more equitable approaches to grant making. This is progress, but it is insufficient.

Some funders are taking bold steps. The Solutions Project—for which I serve as a philanthropic trustee—made and delivered on a commitment last year to direct 95 percent of grant dollars, technical assistance, and other resources to support leaders of color; 80 percent of the project’s funding goes to women-of-color-led groups.

Amid the current crises, trustees (predominantly women of color in philanthropy and frontline communities) did away with grant reporting and traditional proposals. As executive director Sarah Shanley Hope observes, “Frontline leaders have been doing the work for hella long and often times for free. We can break that extractive cycle and move money, media, and momentum behind their leadership with trust and speed.”

The Kresge Foundation, where I work, offers another great example. Since 2014, Kresge’s Environment Program has helped cities combat and adapt to climate change while advancing racial and economic equity. To that end, Kresge makes investments that help elevate the leadership, inclusion, and influence of people of color, people with low incomes, and equity-focused organizations in climate-change-related decision-making. A milestone \$29 million investment made during my first year at the foundation helped “flip the frame” of Kresge’s climate investments. Rather than fund mainstream environmental groups, hoping they might strengthen

their competency around equity, Kresge funded frontline leaders whose work was already grounded in equity, to deepen their climate engagement.

More work ahead

Yet there remains much more that philanthropy must do.

Funders must rebuild trust with frontline organizers and believe that those closest to the problems have the solutions. This does not mean that we do not need technical solutions or deep collaboration across multiple sectors. But the urgency of the moment, and the needed pace of change requires shifts in thinking and culture, as well as new tools and strategies that elevate, support, and celebrate BIPOC communities.

Here's how to start:

- **Support BIPOC leaders.** Funders must correct the longstanding bias against supporting leaders of color. We can start by listening to the recommendations—on strategy, on organizations to support within the ecosystem, and on processes like metrics and evaluation—of those rooted in the communities we seek to impact.
- **Use intermediaries to invest in frontline groups.** For large foundations without relationships on the ground, it is certainly easier to make a few big grants. Funders who can't give directly to frontline groups can make grants to intermediary funds that do the work of managing relationships and grants. Recent years have seen a growing number of intermediary funds that focus on supporting local, grassroots, and frontline BIPOC leaders. These include national funds such as The Solutions Project, the Climate & Clean Energy Equity Fund, the Fund to Build Grassroots Power, The Building Equity & Alignment Fund, and NDN Collective; and local/regional funds such as Regenesi and the Hive Fund for Climate and Gender Justice.
- **Be flexible.** Support frontline groups' holistic, multi-issue approach by providing general support whenever possible, and by allowing grantees to repurpose project funding in response to emerging needs and opportunities. Especially in times of crisis, funders can rethink burdensome reporting and evaluation

requirements. For example, The Solutions Project realized its media tracker, which was already a part of its technical capacity programming for frontline grantees, could also serve as easy documentation of grantee outcomes.

- **Support the ecosystem.** Recognize that movement-building requires time and resources by providing support for coalitions and alliances, as well as individual organizations.
- **Offer support beyond grant dollars.** Unlike their well-resourced counterparts, frontline groups typically lack specialized staff for communications, technology, development, and more. Funders can fill these gaps by supporting ecosystem-level fundraising, peer-learning opportunities, capacity-building, and technical assistance. At this time, when grantees aren't able to meet and convene in person, funders can support virtual gatherings and online learning.

Meet the moment

Change moves at the speed of trust. But BIPOC and poor communities have always borne the burden of proving that they can be trusted.

It took decades of cries from Black mothers—who knew for certain that there were links between their sick or dying babies and the environmental hazards in our neighborhoods—before our government agencies took action.

It took all of America to witness the public murder of George Floyd on television to trust that when Black people say I CAN'T BREATHE, we aren't overstating the facts.

It took thousands of deaths in the aftermath of Hurricane Katrina to spotlight Black communities' outsized vulnerability to climate hazards.

And it has taken COVID-19's disproportionate toll on Black and Brown people to bring widespread attention to our nation's glaring disparities in health care and employment.

Although often ignored by philanthropy, BIPOC-led frontline groups have spent years building trust and making change in their communities.

Today, they are leading movements that are filling the streets and making the links between short-term needs and long-term transformation. And they are radically rethinking energy and economic systems to prevent climate chaos and build shared prosperity. “This moment is what our movements are built for,” says Miya Yoshitani of APEN.

Philanthropy can help meet this moment—but only if we trust the visionary leadership of those on the front lines.

The Other Crisis Facing Our Health Care System: Climate Change

LAURIE MAZUR

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Even before COVID-19 put the American health care system to the test, that system was under strain from another invisible enemy: climate change.

Dr. Cheryl Holder remembers her first encounter with that enemy. An elderly patient with chronic obstructive pulmonary disease—let’s call her Annie Mae—came to Holder in desperation because she couldn’t afford to refill her inhaler. Miami was in the grip of a stultifying heat wave, something that’s increasingly common in a warming world. The heat made it hard for Annie Mae to breathe, so she was running her air conditioning unit night and day, and racking up an electric bill she could barely afford to pay. Now her lifesaving inhaler was financially out of reach.

For Holder, who teaches at Florida International University, Annie Mae’s predicament revealed the insidious effects of climate change, especially on the most vulnerable.

“For people living in poverty, heat waves and other climate impacts can set off a cascade of bad outcomes,” Holder says—including illness, eviction and even death. The pandemic and its economic fallout have only increased vulnerability, especially among the poor and people of color.

Holder co-founded Florida Clinicians for Climate Action, which works to educate doctors, patients and policymakers about the links between climate change and health. She is not alone: Today, many in the health care sector are sizing up the threat of climate change and taking action in their practices, in their facilities and in the communities they serve. And some are taking a broader, more holistic view of health care—considering

their responsibility to address the malignant mix of factors that leave patients like Annie Mae gasping for breath.

The Elephant in the Waiting Room

No one can guess the ultimate toll of COVID-19, but climate change has the potential to cause even more sickness and death. Indeed, a 2009 report by a Lancet and University College London Commission called climate change “potentially the biggest global health threat in the 21st century.” Rising temperatures bring ever-more deadly heat waves, wildfires, storms and flooding. As a result, doctors see more heat stroke, heart disease and asthma, as well as diseases—such as Zika and dengue fever—that have jumped to new locations. The toll of climate change on health is so great—and so underappreciated—that Gary Cohen, president of Health Care Without Harm, calls it “the elephant in the waiting room.”

Also underappreciated is how the health care sector contributes to the climate crisis. Health care’s greenhouse gas emissions made up 10% of the U.S. total in 2013. Globally, if health care were its own country, it would be the fifth-largest emitter on the planet.

But if the health care sector is part of the problem, it can also be part of the solution. With its massive carbon footprint and mandate to promote wellness (or at least, to do no harm), health care is well-positioned to bend the arc of greenhouse gas emissions.

Leading the charge is the U.S. Health Care Climate Council, convened by Health Care Without Harm in 2014. The council represents 19 health systems in 36 states, with the systems’ annual collective operating revenue totaling more than \$215 billion. Council members are reducing their carbon footprints, readying their facilities for extreme weather, and educating and preparing their communities for the impacts of climate change.

And they are making progress. Dignity Health, which is part of CommonSpirit Health, a nonprofit Catholic hospital system, has nearly met its goal to reduce its greenhouse gas emissions by 40% by the end of 2020. Ohio-based Cleveland Clinic, with facilities in multiple states, cut energy use intensity by 19% since 2010. Collectively, council members produce or purchase more than 1 million megawatt hours of renewable energy each year.

Council members also leverage their economic and political power to move markets and policy. For example, Dignity Health advocated successfully for California’s groundbreaking climate legislation, which set ambitious goals for a transition to renewable energy, and a path to achieve them.

Health care systems can open legislators’ doors that may remain closed to, say, environmental groups. That’s been true for Cleveland Clinic, which is the largest employer in Ohio. Jon Utech, senior director of the clinic’s Office for a Healthy Environment, says his team meets with state and federal policymakers to educate them about the health dimensions of climate change and its impact on hospitals: “We go in and say, ‘Hey, climate change is real. It’s happening now and it’s affecting the health of the residents of your district or your state.’”

Climate-Proof Health Care

While working to head off the worst climate scenarios, health care systems are also adapting to the warming that is now inevitable. In the wake of the deadly chaos that engulfed hospitals in New Orleans due to Hurricane Katrina—and more recent hospital closures from hurricanes Sandy and Harvey—they are fortifying their facilities for an era of supercharged storms, fires and floods. Health systems that invest in sustainable, resilient facilities, such as Spaulding Rehabilitation Hospital in Boston, find that savings on operating costs, not to mention lives saved and damages avoided, far outweigh extra construction costs.

“Our climate strategy started with mitigation, but moved to this concept of resilience,” Utech says. For Cleveland Clinic, that means adopting building standards geared to the weather of the future, rather than the past. And it means addressing climate-related risks in the supply chain, so that food and medicine remains available in a crisis.

Most importantly, Utech says, Cleveland Clinic is partnering with local and state officials on emergency management plans that ensure continued operation and patient access during disasters.

Thinking Outside the Hospital Walls

“It’s not just about preparing your facility,” says Rachelle Wenger, system vice president for public policy and advocacy engagement at Common-Spirit Health. “Health care systems are thinking about resilience within

our hospitals, as well as in the communities we serve.” For CommonSpirit Health, these actions flow from a recognition that “human health is inextricably connected to the health of our planet and a commitment to the most vulnerable,” Wenger says.

For that reason, CommonSpirit Health is working to ensure that the benefits of clean energy are available to all. Along with other religious health care systems, CommonSpirit Health, through Dignity Health, invests in the Solar Energy and Loan Fund (SELF) in Florida that provides low-interest loans to low- and middle-income households for solar panels and efficiency upgrades. SELF hopes to prevent the problem that faced Annie Mae, by helping vulnerable Florida residents cool their homes without breaking the bank.

Nonprofit hospitals—a category that includes nearly 60% of the nation’s community hospitals— have another reason to help out their neighbors: They receive substantial tax benefits for providing benefits to the community. To that end, the Affordable Care Act requires nonprofit hospitals to conduct regular assessments of local health needs.

The ACA also urges health care systems to look upstream at the complex factors that shape health and well-being. Indeed, it’s estimated that just 20% of health depends on clinical care; the other 80% is derived from health behaviors and social determinants of health such as income and the environment. Armed with that understanding, health providers can adopt a holistic approach to wellness that reduces the need for costly medical intervention.

“Health is dependent on so many things—where you live, where you work, your economic situation,” says Dr. Holder of Florida International University. “Climate change adds an additional burden. We need to help patients connect the dots, so they can protect themselves.”

Hospitals’ efforts to connect climate change to the social determinants of health are still emerging. According to Denise Fairchild, president of the Emerald Cities Collaborative, the potential is enormous: “Community-based organizations have been working on resilience for decades, by fighting for environmental justice, safe and affordable housing, community infrastructure and economic opportunities. But this work is still at a cottage-industry level. By combining the resources of health care

institutions with the assets of communities, we can deliver community climate resilience at scale.”

Anchoring Communities

One way to scale up community benefits is by leveraging hospitals’ role as “anchor institutions.” Unlike corporations, which might pull up stakes in search of cheaper labor, anchor institutions such as universities and hospitals remain rooted in their communities. Hospitals are often major employers, and they command large budgets for services such as catering and laundry. But too often, that spending benefits national corporations rather than the hospital’s neighbors.

In the depths of the Great Recession, The Democracy Collaborative co-founder Ted Howard set out to change that. Howard partnered with multiple anchor institutions in Cleveland—including Cleveland Clinic—to launch the Evergreen Cooperatives. Evergreen’s trio of businesses now supply fresh produce, renewable energy and laundry services to the city’s anchor institutions.

These worker-owned cooperatives can pay good wages and offer competitive pricing to their clients, because they don’t need to provide hefty profits to shareholders. In an area where 60% of residents earn less than \$25,000 annually, Evergreen provides living-wage jobs with benefits to some 120 people, about 30% of whom have an ownership stake in the company.

Now, through the Healthcare Anchor Network, some 45 health systems across the country are working to create similar synergies in their communities.

The Greatest Global Health Opportunity

The changing climate is indeed the greatest health threat of our time. But, as the 2015 Lancet Commission on Health and Climate Change found, tackling it could also offer the greatest “global opportunity” of the 21st century. That opportunity could be more fully realized if the health care sector deploys its considerable resources to heal the climate and protect communities.

Health systems have the means and a moral imperative to reduce planet-warming carbon emissions. And, increasingly, health care providers

are looking upstream to the social and environmental factors that drive sickness and health. The COVID-19 pandemic has revealed disparities in health outcomes that parallel inequities of race and class. Those same inequities make people like Annie Mae much more vulnerable in a warming world.

Addressing climate change and inequity represents a significant shift for a sector that has long focused on clinical care. But many believe it is a necessary one.

“If our healing mission is to have meaning and relevancy today, health care must change course,” says CommonSpirit Health’s Wenger. “Successfully transforming health care depends on not just what we do within the four walls of hospitals, but also on the part we play to further the health and well-being of communities and the planet—how we ultimately show up in the world.”

Western Wildfires Could Worsen Inequality

MELISSA JONES

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Like so much else in 2020, the wildfires engulfing the western half of the United States are without precedent.

They have advanced with astonishing speed, leaping 25 miles overnight and sending a towering pillar of smoke into the stratosphere. At this writing, the blazes have claimed at least three dozen lives, burned more than five million acres and forced hundreds of thousands of people from their homes.

The fires have also sparked a public health crisis. Much of the western U.S. and Canada is wreathed in acrid smoke, resulting in some of the world's worst air quality. Wildfire smoke exacerbates asthma and other respiratory problems and is linked to increases in heart attacks and strokes. Smoke inhalation can also alter immune function, increasing susceptibility to infections such as COVID-19.

Wildfire smoke affects everyone in its path, but not all people suffer equally.

Wildfires have a disproportionate impact on the health of low-income families and people of color. These groups are more likely to be segregated into areas with unhealthy levels of air pollution—putting them at greater risk of sickness and death from both COVID-19 and wildfire smoke.

The current crises may be unprecedented, but health disparities have long been with us. Across the U.S., there are large and growing gaps in health and life expectancy based on race, class and where people live. Lower-income people in struggling rural towns and pollution-choked

urban areas die, on average, more than a decade earlier than their wealthy counterparts.

A large share of health disparities owe to societal conditions such as low-paying jobs and high housing costs, which combine to create chronic stress, and environmental issues that expose low income families to toxins and unhealthy conditions. The wildfires now raging across the West could worsen existing inequities, widening the gaps between rich and poor, healthy and sick.

But it doesn't have to be that way.

Some cities—including Louisville, KY, San Francisco, CA, and Seattle, WA—are working to improve health outcomes by incorporating racial equity into the way they respond to disasters.

For example, early in the COVID-19 pandemic, the San Francisco Department of Public Health stepped up outreach and testing in Black and Latinx communities, partnering with community-based organizations and faith groups to reach across cultural barriers.

These three cities have also appointed “equity officers,” who determine which groups are most in harm's way and deploy resources accordingly. Equity officers think about what each community needs to be safe, including special strategies to ensure that frontline workers are protected from smoke and exposure to COVID-19.

Increasingly, the unprecedented is our daily reality. And as new threats compound old injustices, too many Americans are consigned to poverty and poor health. To prevent that, we must recognize the disproportionate impact of disasters on already-struggling communities, and make sure disaster response addresses their needs.

More broadly, we need to make sure all Americans have access to healthy neighborhoods, good jobs, and quality education—the building blocks of a long and healthy life.

Monster Hurricanes Are Now Inevitable—but Flooding Is Not

STEPHEN F. EISENMAN

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Hurricane Sally is now parked above the Alabama-Florida border, where “catastrophic, historic flooding is unfolding,” according to the National Hurricane Center. More giant storms—Paulette, Teddy and Vicky—are stacked up over the Atlantic like bowling balls waiting to strike.

The 2020 Atlantic hurricane season has already been one of the most active on record, and it is only half over.

Last month, Hurricane Laura—one of the most powerful storms ever to hit the U.S. mainland—devastated Lake Charles, Louisiana, where many are still without electricity and clean water. There have been so many storms this year that the people who christen hurricanes are running out of names, and will soon resort to naming storms for Greek letters.

Welcome to the new normal. Because of human-induced climate change, we can expect bigger, wetter, more powerful storms for the foreseeable future.

But while monster storms are now inevitable (though cuts in greenhouse gas emissions could keep them from getting much worse), flooding—and the human suffering it causes—is not.

In fact, much of the flooding we see is a result of disastrous policies and practices—from incentives to build in the flood plain to the wholesale destruction of wetlands. No one knows this better than the grassroots leaders who comprise Higher Ground, the largest network of flood survivors in the country.

From their hard-won wisdom, these leaders have put together a manifesto on preventing—and surviving—floods. Here’s a summary:

1. Don't build where it floods.

It seems obvious, but corrupt city councils and planning boards allow it all the time. In fact, between 2000 and 2016, the United States saw more population growth in flood plains than outside of them. And don't assume that current flood maps are right: more than half of all flooding occurs outside the flood plain. Also: factor in future climate change.

2. Flooding is bad enough; racism makes it worse.

Historic segregation, the result of redlining, has led to gross underinvestment in flood control infrastructure in Black and brown communities.

It's time for reparations in the form of state and federal infrastructure investment and housing programs, such as expanded Community Development Block Grants. Those investments can prioritize the hiring of local residents, and provide apprenticeships and job training when needed.

3. Protect or restore the natural ecologies that reduce flooding.

When it comes to flood control, wetlands, forests and sand dunes beat seawalls, dams and sewers any day of the week. The economic benefits of protecting natural areas greatly outweigh the costs.

And yet rather than protect or restore them, we continue to pave them over. Enforce environmental laws, and pass new ones to build natural buffers against floods. And require all federal and state funded resilience projects to prioritize nature-based solutions.

4. Disclose flood risk.

Before moving into a new home or community, people should know about present and future flood risks. Unfortunately, that information is often hard to find. Currently, 20 states do not require sellers to disclose a property's flood risks or past flood damages to a potential buyer. The other 30 have differing disclosure laws.

We need better, more accurate and future-oriented data and mapping if we are to mitigate future flood events.

5. Make flood insurance fair.

National Flood Insurance Program premiums do not reflect actual flood risks. Many properties in high-risk areas receive subsidized rates, despite the risk of catastrophic losses which are borne by taxpayers.

We need to base NFIP insurance rates on actual risk combined with means-tested affordability assistance.

6. Bail out people, not expensive properties, after a flood.

After a disaster, governments use benefit-cost analyses (BCA) to determine which communities receive support and how much. But owners of low-value homes generally receive settlements too low to allow them to relocate to better, safer neighborhoods thus perpetuating past housing discrimination.

Revise BCA protocols to factor in the value of saving lives, preserving historical and natural assets, and protecting vital and diverse communities.

7. Shift to renewable energy and move threatened communities out of harm's way.

Until the climate is stabilized, flooding will continue to increase. Homes, towns and even whole cities will need to be moved. The sooner we plan for relocations, the better off we'll be.

8. Don't diss the knowledge and know-how of survivors; instead, use it.

Flood mitigation plans are usually drawn up by local, state and federal agencies with limited citizen input. But when you've been flooded multiple times, you become an expert. Mine that experience.

In short, we can't stop the storms from coming, but there is lots we can do to keep people safe and whole.

Wildfires Are a Growing Problem but Developers Can Be Part of the Solution

JIM HEID

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Across the American west, 2020 has been the most active fire season on record. So far, more than 8 million acres have gone up in flames, with dozens killed and untold billions in property losses.

Call it the new normal. As the planet warms and human settlements expand their reach, we can expect bigger, hotter, more-devastating blazes. Preventing fires—and reducing their toll—is an urgent priority for both the public and private sectors.

Most wildfires occur in the “wildland-urban interface” where development pushes ever deeper into fire-prone natural areas. That expansion is driven by consumer demand—the desire to live close to nature—as well as by housing shortages in and around major cities. The lack of affordable housing, in particular, has driven many low-income families to housing vulnerable to wildfire on the fringes of urban areas.

Combined with the bigger, hotter fires of a changing climate, development at the forest’s edge has created a volatile situation—literally. The resulting wildfires affect everyone, but they take the biggest toll on households with fewest resources, who then have the fewest options when it comes to rebuilding.

In response, many developers are rethinking how we build. And we are learning that there’s much we can do to reduce fire risk. A new report by the Urban Land Institute offers a menu of best practices—including hardening structures, managing vegetation, comprehensive and regional planning, and tenant and community engagement.

It is possible to reduce fire risk, even at the forest's edge. One of the big takeaways in California is that nature-rich areas are not just a lifestyle amenity. Well-managed buffer zones of parks and open space—without thick, flame-spreading forest canopies or built-up underbrush, for example—can act as critical firebreaks around communities that help slow or stop wildfires. But in return for proximity to nature, communities need to accept more density inside town boundaries.

That way, we can address our critical housing needs, while keeping the area that must be protected from fire to a manageable size.

For communities destroyed by fire, rebuilding offers an opportunity to prevent a recurrence. That's why Pepperwood, a Northern California research institute that manages a 3,200-acre field station, has become a living laboratory for wildfire resilience. In October 2017, the Tubbs fire—at the time the most destructive fire in California's history—burned right through Pepperwood, causing the loss of all but one major structure.

Now, Pepperwood is rebuilding three structures with materials that are ignition-resistant, sustainable, and non-toxic. The new buildings have a mix of noncombustible metal exteriors and cement fiber panel cladding as well as cement plaster walls and dense black locust decking to reduce flame spread. The buildings also have zero-VOC (volatile organic compound) clay walls in some areas and in others, low-VOC paint.

Buildings have few structural depressions where embers could collect and ignite. The surrounding landscape is beautiful and carefully planned, but includes little flammable vegetation.

At Pepperwood these steps were taken voluntarily, often going beyond county and state requirements—and beyond what was covered by insurance, as a way to demonstrate leadership and 'proof of concept' to the building industry for more fire resilient techniques. This will help further inform building codes to make fire resilience the rule, rather than the exception.

Government agencies in wildfire-prone areas are increasingly willing to impose regulations to manage wildfire impacts and costs. The fact is, those regulations work. California instituted its Chapter 7A Building Code in 2008, which has since become an internationally recognized example of best practice in fire resilience. Homes built according to that code have

survived recent wildfires at higher rates than their conventionally-built counterparts.

In the wake of devastating fires, more jurisdictions are regulating construction in the wildland-urban interface. Austin, Texas recently adopted a code with best-practice ignition-resistant standards for both new and remodeled structures—a heavy lift in a regulation-resistant state. The Austin Fire Department coordinated the drafting and approval of the new code. And city officials laid the groundwork for success with an extensive participatory process that involved public, private, and community stakeholders.

Another lesson that emerges from this work is the value of public-private partnerships. Communities are safer when developers consult public-sector fire experts earlier in the permitting, design, and development process. And government agencies extend their reach when they rely on the private sector to implement practices. Nongovernmental organizations have a role to play, too—adding critical capacity on community engagement, wildfire education, vegetation management, and post-fire recovery.

One effective public-private partnership emerged in Boulder, Colorado, after the 2010 Fourmile Canyon fire. There, Boulder County created the Wildfire Partners program to help homeowners increase the wildfire resilience of their properties. The program is staffed by local government officials, along with representatives from the insurance company Allstate, which provides discounts to homeowners who complete the program. In nearby Vail, the local board of realtors initiated and funded a similar program called REALFire, which has since won support from the state and county.

There is much we can do to protect people and property from the growing risk of wildfire. The practices outlined above are being implemented in communities across the U.S. and around the world, but they need to be used more widely. And it's important that the real estate industry work to protect communities, both in our own development work and in better understanding and advocating for policies that protect the most vulnerable.

There will be more devastating blazes in the years to come, but developers—in partnership with government and nonprofits—can build a more fire-resilient future.

Reversing Rollbacks in the Post-Trump Era Is Not Enough

DAVID F. COURSEN

Originally published December 7, 2020 in The Hill

The Biden administration will surely halt the Trump-era assault on the Environmental Protection Agency (EPA), which featured regulatory rollbacks and ruinous proposed budget cuts. But to protect the health of our nation's people and environment, the new administration must go further—effectively enforcing our existing laws and providing adequate resources for environmental protection.

A centerpiece of the Trump-Wheeler team's environmental "agenda" was an endless parade of regulatory rollbacks, 104 by one count—promptly reversing them is an obvious first order of business. But the sad reality is that, even without rollbacks, over 130 million Americans live in areas that don't meet air quality standards, and almost half of the nation's rivers and streams are in poor condition.

One reason we face these problems is that environmental regulations can only protect our nation's people if they are being followed. But serious violations of environmental requirements are rampant, with noncompliance rates of 25 percent common among all pollution sources, and much higher rates for those with the biggest health effects. More than 80 percent of the most significant air polluters violate the Clean Air Act, and nearly every large city violates the Clean Water Act. More than 90 percent of large sewer systems illegally discharge raw sewage and contaminated stormwater.

These numbers, bad as they are, may understate the problem. Pollution levels are typically measured and recorded by monitoring equipment, but that only catches pollution that occurs at the monitor's location during the time it is operating. Noncompliance may go unreported and states may not share compliance information with the EPA. We also know that

a relative handful of facilities are responsible for an enormous share of our nation's toxic contamination, and may produce hundreds or thousands of times more than similar facilities.

Such wholesale violations of environmental requirements have real consequences: air that is not safe to breathe; impaired water quality for rivers and streams; contaminated drinking water; and human exposure to dangerous chemicals. Often the biggest burdens fall on low-income and minority communities.

These realities underscore the need to use the full range of enforcement tools—inspections, monitoring, compliance orders and penalties for non-compliance—to protect the environment. A robust enforcement program can identify, address and penalize noncompliance and deter potential violators by signaling that compliance is expected and violations will be found and addressed.

But, instead of using enforcement as a tool to enhance protection, the EPA is supplementing its regulatory rollbacks with a stealth program of enforcement rollbacks. In 2018, inspections reached their lowest level in almost two decades. The Trump administration has brought fewer than half as many pollution cases annually as the Bush and Obama administrations. The EPA enforcement actions have also been less effective, with the lowest spending on reducing pollution since 2003. We've also seen smaller reductions in illegal air emissions and wastewater discharges and fewer cleanups of contamination under the Superfund program.

Criminal enforcement is a linchpin of an effective enforcement program, prosecuting the most serious violations and deterring others. But in 2018, the EPA charged the fewest polluters with environmental crimes in this century, and brought a mere nine Clean Water Act criminal enforcement actions—for the entire nation. Fines were down, and the number of felony prosecutions—a measure of the seriousness of the crimes—has dropped steeply. Perhaps the starkest indicator of the Trump administration's disdain for criminal enforcement was then-Administrator Scott Pruitt's decision to divert EPA criminal enforcement staff from their work protecting the environment to providing him with a round-the-clock private security detail.

Another front in the Trump-Wheeler team's war on environmental protection was the EPA resources. Every year, the Trump administration's biggest proposed agency budget cuts were aimed at the EPA. While bipartisan majorities in every Congress rejected the cuts, the onslaught and the size of the cuts—around 30 percent—normalized the expectation that the EPA should be cut, effectively preempting discussion of the critical need to increase environmental protection resources.

In effect, the proposals created a sideshow that distracted attention away from the slow resource erosion that the EPA has faced for many years. Twenty years ago the EPA's staff was 30 percent larger than it is today, and in 1980 federal spending for the EPA in constant dollars was twice its current level. The agency's budget would have tripled since then if it had just kept pace with the growth in federal discretionary spending. The EPA's state and tribal partners have faced similar problems, with more than a decade of shrinking resources. This crippling decline in environmental protection resources has largely stayed below the radar, but it is hard to imagine real environmental progress without addressing it.

All this points up the need to do more than reverse the Trump-Wheeler team's regulatory rollbacks and slow the erosion of resources. While both steps are essential, they must be accompanied by effective use of enforcement, with the staff and resources to do the job right. The Biden administration must repair the damage of the Trump years, and invest in a cleaner, healthier future.

Steps to Cool the Climate Will Improve Water Quality, Too

JEFF PETERSON

Originally published December 9, 2020 in The Hill

While much of Washington remains mired in partisan gridlock, there is new cooperation in two areas critical to managing climate change: reducing carbon emissions from agriculture and shifting to electric vehicles.

This is obviously good news for the climate, and it will help protect the quality of rivers, streams and coastal waters across the United States. It turns out that what's good for the climate pays dividends in clean water.

Since the passage of the Clean Water Act in 1972, our nation has made progress in restoring the health of rivers, lakes and coastal waters. The act spurred upgrades in sewage treatment, reduced industrial pollution and protected wetlands. Congress stepped up the fight with additional measures to reduce polluted runoff from non-industrial sources, manage municipal storm water discharges and protect critical ecosystems like the Great Lakes and Chesapeake Bay.

This work saved countless water bodies and protected sources of drinking water for tens of millions of Americans. But stubborn and serious water pollution problems persist.

For example, research by the Environmental Protection Agency (EPA) and states found that 46 percent of rivers and streams are in poor biological condition. Chemical stressors remain widespread: almost half of stream miles have high levels of phosphorus; 41 percent have high levels of nitrogen.

Nutrient pollution from agriculture and other sources can cause algae blooms and “dead zones” from low oxygen levels. Research by the Office

of Science and Technology Policy found low oxygen conditions in nearly half of coastal and estuarine ecosystems studied. And the National Oceanic and Atmospheric Administration (NOAA) reported that the dead zone in the Gulf of Mexico, the biggest in U.S. waters, would likely exceed 6,000 square miles in 2020.

Here's the good news: steps to address climate change will reduce water pollution.

For example, improved agricultural practices, such as crop rotation, cover crops and no-till farming have what the U.S. Department of Agriculture (USDA) calls a "profound impact" on the climate by dramatically increasing carbon storage in soil. And, as an added bonus, they will also reduce water pollution by minimizing runoff from fields.

These same practices can also result in more efficient use of fertilizer. Less fertilizer reduces release of nitrous oxide, a highly potent greenhouse gas, at the same time that it reduces nutrient runoff in streams and rivers.

Prospects for wider application of these measures are looking up. The Biden climate plan calls for investing in "climate-friendly farming such as conservation programs for cover crops and other practices aimed at restoring the soil and building soil carbon, and in the process, preventing run-off . . ." The House Select Committee on the Climate Crisis called on Congress to "increase climate stewardship practices and agricultural carbon sequestration."

Then on Nov. 17 came the announcement of an unprecedented cooperative effort among farm and environmental groups on climate change. The new Food and Agriculture Climate Alliance calls on farmers to "maximize the sequestration of carbon and the reduction of other greenhouse gas emissions."

Also on the same day came the announcement of a new Zero Emission Transportation Association dedicated to advancing "national policies that will enable 100 percent electric vehicle sales throughout the light-, medium-, and heavy-duty sectors by 2030." The association includes both companies like Tesla and Uber as well as electric power utilities including Southern Company, PG&E, Duke Energy and Con Edison.

Accelerating the shift to electric vehicles as power utilities reduce their emissions will significantly reduce greenhouse gases. This, too, will benefit water quality. The nitrogen oxides emitted by vehicles into the air eventually fall to the ground and are washed into streams, rivers and coastal waters. One-third of the nitrogen in Chesapeake Bay comes from the air, as does about 26 percent of the nitrogen in the Gulf of Mexico. Vehicles and power plants are the largest sources of this nitrogen pollution.

Political gridlock notwithstanding, things are looking up when diverse interests hammer out agreements on tough environmental challenges. The future looks even brighter when efforts to manage one environmental problem advance progress on another. Now it is up to Congress to recognize the many benefits of these policies and adopt the same spirit of cooperation.

Why We Need Antiracist, Feminist Leadership on Climate and Energy

JENNIE STEPHENS

Originally published December 9, 2020 on Union of Concerned Scientists Blog

Trained in environmental science and engineering, I have been working on climate and energy for over 25 years. My professional experiences as a woman in this technical field have taught me that the inadequacy of our efforts to respond to the climate crisis—our inability to end fossil fuel reliance and transition to a renewable-based society—is not due to a lack of technological innovation or scientific expertise. Rather, our ineffectiveness results from a lack of investment and attention to social innovation and social justice. To fix that, we need an inclusive and integrative approach to climate and energy policy.

Rather than continue to perpetuate the inadequate, narrow, exclusive, male-dominated technocratic approach that I call “climate isolationism,” it is time for a new kind of leadership that embraces antiracist and feminist principles and prioritizes transformation toward an equitable and just future that strives for inclusive prosperity for all.

At this critical time of interconnected crises of health, climate, housing, growing economic inequities, racial disparities, and structural racism, I believe we will not be effective until social justice, racial justice, and economic justice are at the core of all climate and energy policies. This realization led me to write my new book—*Diversifying Power: Why We Need Antiracist, Feminist Leadership on Climate and Energy*.

Beyond climate isolationism

To date, climate action has too often been constrained within a limited technocratic perspective. I coined the term “climate isolationism” to characterize this common but unproductive framing of climate change as a narrow, isolated, discrete, scientific problem in need of technological solutions. Decision-makers working within a lens of climate isolationism

often focus quantitatively on carbon reductions, greenhouse gas inventories, carbon pricing, and global average temperature while inadvertently dismissing the human dimensions associated with these quantitative measures. This technocratic focus limits public engagement and excludes people because the language and approach only resonates with a small subgroup of society. Given the stark inequities in access to science education and the structural racism and sexism that pervades science and engineering, this technocratic focus does not resonate with most people.

In addition to being exclusive, this technocratic lens is dangerous because it obfuscates and diminishes the potential for transformative social change and social innovation and therefore dismisses and ignores social justice. This has resulted in climate action and energy policies that exacerbate racial disparities and economic inequities by further privileging those Americans who already have wealth and power. Rather than recognizing that responding to the climate crisis is an opportunity for societal transformation, climate isolationism often projects the need for sacrifice and hardship which further diminishes the effectiveness of climate action.

A new kind of leadership

Despite our nation's ideals of freedom and equality, the political culture in the United States continues to embrace patriarchal leadership (based on domination, exclusion and control) and reinforce white supremacy (systemic and historical privileges for white Americans). This means that wealth and power are concentrated among white Americans, mostly men. The culture of science and scientists is part of this exclusive culture, and those advocating for technocratic climate and energy policies are all too often white men. Until power is redistributed, and until we have more diverse leadership on climate and energy, we can expect to continue the legacy of narrow, ineffective climate policies.

When women, people of color and indigenous leaders join leadership spaces where they have been historically excluded, they bring different life experiences, different priorities, different perceptions of risk and a different capacity to center social justice. Research on risk perceptions shows that white American men see all kinds of threats—from climate change to automobile accidents to cancer—as less risky than non-white American men and women. Diversifying leadership is essential to effectively balance risk perceptions and center social justice in our policies.

The Squad

The four junior Congresswomen known as The Squad bring inspiration and hope for a new kind of leadership. Since coming on the national stage just over two years ago, they have transformed the national discourse on climate and energy policy by explicitly linking the climate crisis with economic justice and jobs, health and wellbeing, the criminal justice system, and the need for public investments in housing. By centering climate action on the need for public investments in people and communities, the Squad has demonstrated how to build multiracial and multigenerational coalitions in climate and energy policy.

Concern about John Kerry

As John Kerry prepares to take on the new role as Climate Envoy for the United States, it is critically important that he listen and learn from younger, more diverse climate leaders. In that way, he can broaden his perspective beyond the limited and ineffective technocratic approaches he has championed in the past. I do not know Kerry well, but I am concerned about his climate isolationist perspective. Last July I was shocked to hear Kerry, in a webinar on the climate crisis, state that the solution to climate change is technology. And just last week Kerry wrote an op-ed about carbon pricing and relying on the market and the private sector to “solve” the climate crisis. Given the depths of the crisis, it is time for leaders like John Kerry to realize that neither the market nor technology can advance climate and energy justice. Neither the market nor technology will redistribute power in the ways that are necessary. We need massive public investments in people and communities. We need to push leaders like Kerry—who seems to be calling for the same things he was calling for 20 years ago—to refresh their ideas and consider investing in social innovations beyond carbon pricing.

Distributing power to the people

Antiracist, feminist leadership is focused on resisting and restructuring so that power is distributed rather than concentrated. This kind of leadership requires constant resistance to practices, processes and policies that perpetuate economic inequities and racial disparities. We need leaders who acknowledge who currently has power, and who understand the priorities of those who want to concentrate their own wealth and power. Importantly, we need leaders who understand who has been—and continues to be—excluded from positions of power.

As the power and influence of the polluter elite continues to grow even during the pandemic, we need more leaders, including scientific leaders, who can stand up for structural and transformative change. We need scientists to recognize the constraints of “climate isolationism” and expand their advocacy to integrate all the opportunities for advancing social justice while transforming to a renewable-based society. I am optimistic for this shift in leadership, mostly because of the power of youth—I have two daughters who are 20 and 21. Through them I see both the passionate concern about the future, and also their deeper understanding of the problematic power dynamics and the interconnectedness of the world’s biggest problems. Young leaders, including those involved in Sunrise and the Movement for Black Lives, offer us all inspiration and hope.

Beyond 'Checking the Box': Building a Diverse, Inclusive Environmental Movement

LAURIE MAZUR

Originally published December 11, 2020 in Earth Island Journal

In July, Andrés Jimenez took the helm at Green 2.0, an independent advocacy campaign to increase racial diversity among environmental organizations. Previously, Jimenez served as senior director of government affairs at Citizens Climate Lobby (CCL), and as associate director of government relations at Ocean Conservancy. The timing was right, as the nation engaged in a long-overdue reckoning with racism that prompted considerable soul-searching within the (very white) mainstream environmental movement. Here, Jimenez talks with Laurie Mazur of the Island Press Urban Resilience Project about progress made, challenges unmet, and reasons for hope.

LM: Tell me a little about your journey how you came to be doing this work.

AJ: I grew up in West Virginia in a generation where you could go outside and play in the woods, by the creeks. We wouldn't come in until mom called us in for dinner. It really gave me a passion for environmental work.

I have also experienced what it is to be a person of color in this movement. I've seen firsthand organizations that are doing the right thing and organizations that are not. For example, a few months ago, I sat in a room with 40 organizations, looked around the room, and I was one of two people of color represented. I was disgusted. So it's experiences like that—and there's plenty more I could share with you—that made me decide that Green 2.0 was where I wanted to be.

LM: How did Green 2.0 come about, and what are you working on now?

AJ: Green 2.0 was launched in 2014 as a working group of thought leaders at the intersection of environment and race. We commissioned a report that found that the mainstream environmental movement had failed to diversify their staff despite decades of promises to do so.

So we started to publish an annual report card that looks at the top 40 foundations and environmental groups when it comes to hiring people of color and putting people of color on boards.

And in 2019 we decided to shift our focus towards accountability through transparent analysis, praise, and exposure of the collective work of individual NGOs, foundations, and government agencies. We're elevating public attention on the racial demographics of environmental leadership, and the degree to which leaders are positioned to prioritize equity in organizational strategies, programs, and operations.

LM: You became president of Green 2.0 at a moment when many Americans are reckoning with racism in all of its forms. How is that playing out in the environmental movement?

AJ: We're seeing some organizations step up and say, "We need to put this into our strategic plan; we need to make sure that we're changing, culturally and at the foundation of who we are."

Unfortunately, other groups think they can issue a statement of support for Black Lives Matter, or have one organization-wide conversation about race and then call it a day. They say, "We've checked that box."

LM: What does it look like to move beyond checking the box, to really change the culture?

AJ: It means being proactive. Organizations need to say this isn't just something we're going to put in the corner and kind of work

on when we have time, or we'll hire one person and that is the only person that needs to deal with this.

There needs to be an understanding that organizations need to change from bottom to top. They need to change how they're working, their hiring practices, who they're giving a voice to within their organization, who they're giving leadership responsibilities to. They need to be putting strategic plans together. They need to be working with staff, because staff is demanding it.

Lots of groups are looking in the mirror and saying, "We're not doing the best we can. We're not where we want to be or should be." When we see that, it gives us hope. Even though it's late in the game, these organizations are coming to the table.

We see organizations like the National Wildlife Federation, Sierra Club, and Ocean Conservancy, to name a few, that are stepping up. They are saying, "We may fail, we may stumble," but at least they're putting the effort into trying.

The worst case scenario is an organization that says, "This isn't for us, I'm not stepping out of my comfort zone, I'm scared of what funders may think, I'm scared of what volunteers and members may think, so I'm not going to try."

LM: Diversity has become an end goal for a lot of organizations. It's assumed that simply hiring more people of color will address the racism that permeates our culture. I'm thinking of when Ruth Tyson resigned from Union of Concerned Scientists earlier this year and wrote a moving exit letter about why she found the culture there unwelcoming. Is diversity hiring enough?

AJ: I think 2020 proved to a lot of organizations that diversity hiring alone isn't enough. We saw some organizations make good-faith efforts to hire more diverse staff, but they didn't have the infrastructure in place to make those new hires feel included and valued.

That's why many organizations have a higher turnover rate for people of color than white staff. The failure to retain those hires is significant and often indicates that something is broken in terms of the work culture. It means that the organization needs to dig deeper to figure out what about the organizational structure itself is not helping them retain people of color.

One of our reports, *Leaking Talent*, found several factors that helped organizations improve retention for employees of color, such as including diversity and inclusion commitments in the organization's mission, vision, and values and the organization's strategic planning process. We also found that transparency in employee development and evaluation is really important.

LM: So, when you step back and take a look at the environmental movement as a whole, how are we doing?

AJ: We're doing better, but we have a long way to go. There are success stories, but there are also organizations that, year after year, refuse to take this seriously. They're just saying, "Oh, we hope this goes away, so we can go back to our normal practices."

But I'm here and Green 2.0 is here to say this is not going away. The idea that the environmental movement cannot succeed without having leaders and people of color at the table, that idea will not go away.

That's why our report card, for example, is so important, because we're showing which of these organizations are not being transparent, which are falling back on hiring people of color. There is no escaping the numbers. Those are real. They're not anecdotal.

LM: And it seems like foundations in particular are among the least transparent.

AJ: Yes. Participation among the top 40 environmental nonprofit organizations in Green 2.0's annual survey that is used to create our Transparency Report Card increased from 82 percent to 90 percent from 2017 to 2019. Participation among foundations,

however, has remained stagnant at 35 percent. The vast majority of the top 40 foundations critical to funding on environmental issues have not reported any diversity data to GuideStar over the last three years.

LM: Wow. So, addressing the racism and lack of representation in the environmental movement is the right thing to do, but it's also the smart thing to do, right? If we want to preserve a habitable planet?

AJ: Absolutely. We've seen so many reports and scientific data showing that communities of color are disproportionately impacted by climate change, and care deeply about environmental issues. Yet in our meetings, the least represented group is people of color. People ask, "What should we be doing when it comes to people of color? What do communities of color need?" How about you actually bring in people of color and have them sit at the table, and ask them?

Until we change who's at the table, we're not going to change.

LM: There are two distinct strands in the American environmental movement: the mainstream groups that grew from conservationist roots, and the environmental justice groups that are more concerned with social equity and health. I'm sure it's not a coincidence that the former, led mostly by white people, has a lot more resources and power than the latter, which is mostly led by people of color. So a truly diverse, representative movement would require a shifting of power and resources. Do you see that shift happening?

AJ: Overall, I don't see that shift happening where it needs to happen. I do not see a shift of power among the top leaders.

LM: What can we do from wherever we sit as activists, funders, or just regular people who care about the future of life on Earth to bring about "Green 2.0?"

AJ: The most important thing to keep in mind when we're talking about diversity, equity, and inclusion is that it's about power.

Inequity in communities of color is a result of systematically consolidating power outside of those communities. So, I would invite folks to think about what we're doing in relation to this power imbalance. What are we doing to share power, and to build power in these communities?

We need to not only say, "Oh, we hope that there are people of color coming in to be leaders," but we need to work to make sure that we're giving people of color opportunities within our organizations.

One of the things that happens—and I've seen it firsthand—is you get, for example, a project coordinator who comes in, a young person of color. That's where they stay. There is no attention to their career, there's no one saying, "Let's look at what would you like to do, how can we give you a voice, how can you grow within this organization, what are the tools that we can give you to succeed?"

And when the organizations aren't looking to do that, you're setting someone up for failure, because what's going to happen is they're going to sit there for about a year, maybe two, and say, "I thought I would be farther along in my career. I look over and I see someone else who is succeeding and growing, but I'm still here. Why?"

LM: What can funders do?

AJ: They need to ask, "What communities of color, what leaders, should we be giving resources to?" Some of them have stepped up over the last few months, and they need to continue to do that. They need to realize that just doing it in the year 2020 and then forgetting about it in years to come isn't helpful.

Foundations need to step in and be long-term partners. There cannot be change when you come in looking for a short-term solution. Foundations need to be giving money to communities and organizations of color with the idea in mind that this is a long-term relationship, not, "We'll help you for a year and then we're going to go back to business as usual."

LM: What makes you hopeful about the future?

AJ: I do have hope that environmental organizations as well as foundations are changing. Are they changing as quickly as I would like? No. Are they changing at the top, the way Green 2.0 would like? No.

But there are foundations and organizations trying to step up, trying to look internally, trying to make a difference and change, funding outside of the box, hiring people of color all throughout different programs. That gives me hope.

I'm very hopeful for the youth who are so passionate about the environment. Look at the Sunrise Movement. It's a grassroots, diverse, youth-led organization working to fight climate change. They give people of color full-on leadership roles, in which they can speak on behalf of the movement. They don't hold back, and they're succeeding. They are talking about climate change to a whole new generation.

So when you look at them and how diverse they are, how inclusive they are, and the work that they're doing, that to me is a sign of success. It's hopefully a sign of good things to come.

This interview has been edited for clarity and length.

Make the Corn Belt a Carbon Belt

DANIEL IMHOFF

Originally published December 10, 2020 in The Progressive

In 2020, U.S. federal farm subsidies reached \$46 billion, at least a three-fold increase in annual agricultural supports since President Donald Trump took office. This truly staggering level of taxpayer spending constituted nearly 40% of U.S. farm income, making agriculture a de facto public-private partnership. Some might call it socialism. Others might see it as a blatant attempt to buy votes in flyover country during an election year.

The fact is, the billions spent on the farm sector today are neither protecting the future of U.S. agriculture nor preserving the traditional family farm. But that investment could actually provide a social compact that might steer us away from climate catastrophe.

U.S. agriculture certainly needs help. The perpetually tempestuous farm economy suffered tremendous blows this year—from the administration's failed trade war with China, to restaurant sectors and meat packing plants ravaged by COVID-19 shutdowns. A super windstorm called a derecho impacted up to half of the Iowa corn crop this summer. And despite all these aid programs, U.S. farm bankruptcies were up 8% from 2019.

Meanwhile, the climate is overheating with record-breaking temperatures and mega-droughts and mega-fires scorching the American West. Our capital- and machinery-intensive system of industrial agriculture remains a key driver of this existential threat, through continual land cultivation, fertilizer use and livestock emissions.

But with some leadership and vision, the heavily subsidized farm sector could provide on-the-ground solutions to slow the impacts of climate change.

We are living in Dust Bowl-like times that require bold action. This is why the Farm Bill, which funds the U.S. Department of Agriculture's \$100 billion annual budgets, was formed in the first place. The nation's most precious nonrenewable resource—topsoil—was blowing away in the 1930s. Conservation practices were introduced during that time, along with government support for farmers.

This included the Plains Shelterbelt Project, an effort to plant a 100-mile wide swath of trees from North Dakota to Texas to provide a line of defense against wind erosion and the Dust Bowl. Many of those conservation practices, sadly, have since been abandoned.

We need the equivalent of a modern-day agricultural moon shot—a plan to transition the Corn Belt to a carbon belt. Hundreds of millions of acres now planted in corn and soybeans could provide year-round ground cover with permanent plantings that can pull carbon out of the atmosphere and store it in deep-rooted plants in the soil.

The billions we spend on crop insurance for marginally productive acreage could be put to better use with permanent carbon sequestering plantings of grasses, trees and other native species. Cover crops can protect hundreds of millions of acres during the winter and between rotations to help build resilience in the soil and reduce the need for energy-intensive fertilizers.

Research into perennial grain crops (which don't require annual tilling of the soil) must also be dramatically increased. Livestock raised on the land, rather than in methane-spewing factories, should receive far more support. And we could trade a majority of our surplus corn and soybeans to other countries to keep rainforests from being cleared for feed grain monocultures.

Establishing a carbon belt across the U.S. heartland is as essential as the moon landing was 60 years ago. We still have just one planet. Ensuring its long-term habitability is arguably the greatest challenge before us.

Water Warriors: Meeting at the Intersection of Climate Change, Water and Equity

LAURIE MAZUR

Originally published in the Kresge Foundation 2019 Annual Report

As the planet heats up, water crises are on the rise.

The specifics vary by place—flooding in the Gulf South; water shortages in California; utility shut-offs in Detroit. But one thing is true almost everywhere: Pervasive inequity means that water crises hit low-income communities and people of color first and worst.

This is also true: When those communities come together to share expertise and build solidarity, real change is possible—from neighborhoods on the front lines of climate change to the halls of Congress. That’s the idea behind the national Water Equity and Climate Resilience Caucus, launched by PolicyLink in 2018 with support from The Kresge Foundation.

The caucus works to shape solutions to water challenges, centering on the needs of front-line communities. Its members share information and a common cause.

“The caucus allows us to compare notes and say, ‘Hey, what’s happening in Flint (Michigan) is not unlike the water crisis in the Navajo Nation,’” says Kim Pate, vice president of the NDN Collective, a South Dakota-based indigenous rights organization. “Then we can create widely shared awareness so that people can see the patterns and take collective action.”

The idea for the caucus began to germinate in 2016, when Dr. Jalonne White-Newsome joined the Kresge Environment Program as a senior program officer. At that time, “the intersection of climate change, water and

equity was not really defined,” she says. “There was a dearth of research, models of work and funding. It was a huge gap that needed to be filled.”

The need for such work grew more urgent after the 2016 election, when the new administration began to dismantle a half-century’s worth of environmental protections. But organizations working on water issues rarely focused on the population of greatest concern to Kresge: low-income communities of color in urban areas.

With the foundation’s support, PolicyLink colleagues surveyed front-line groups to understand the challenges they confronted, and to see if there was a need for a grassroots forum on water and climate issues. The response? A resounding “yes.”

“Front-line groups were hungry for a forum where community concerns stay centered, and local leadership is out in front,” says Kalima Rose, vice president for strategic initiatives at PolicyLink. In this spirit, Rose recruited Colette Pichon Battle to serve as caucus co-chair.

The national Water Equity and Climate Resilience Caucus was born.

‘Watchdogs for Each Other’

The caucus provides a dedicated space for front-line activists to set their own agenda and priorities. There have been in-person convenings as well as webinars and online networking. Work groups connect monthly to discuss safe and affordable water; climate-related drought, flooding and sea-level rise; and workforce and business opportunities in green water infrastructure. The groups also have collaborated on a climate resilience and water equity policy platform, which has informed legislation at the federal and state levels.

Caucus members learn from one another, creating powerful synergies and alliances.

For Monica Lewis-Patrick, president of We the People of Detroit, the caucus is “a library of resources, of influence, of expertise that you can call upon, that you can trust.”

And caucus members share tactics and strategies. For example, in 2019, caucus members in California—from the Community Water Center

and Leadership Counsel for Justice and Accountability—helped secure a \$1 billion infrastructure fund for communities that lack access to clean water. Now advocates in Michigan are borrowing their playbook to promote similar statewide investments. And the Gulf Coast Center for Law and Policy developed a “Green New Deal” for the Gulf South, which inspired the NDN Collective to create an analogous plan for Indigenous communities across the country.

Caucus members have also come to understand the complex connections among issues such as flooding and water quality.

“We’re not as isolated as we may think,” Pate says, “because these things are all interconnected.”

That deep understanding of linked challenges safeguards against “solutions” that solve one problem at the expense of another.

“We’re kind of like watchdogs for each other,” Pate says.

PolicyLink helps bridge the Water Equity and Climate Resilience Caucus with the Clean Water for All Coalition, which is primarily comprised of environmental groups with a presence in Washington, D.C., policy-making circles.

“The coalition and caucus complement one another,” says Ronda Chapman, a senior associate at PolicyLink who leads the coalition. While the national coalition provides caucus members with real-time connection to policy developments, caucus members bring equity principles and a grassroots perspective to those shaping federal policy. As a result, “the coalition has been shifting over the last year, identifying equity as a priority and a principle for how decisions are made,” Chapman says.

Water Warriors

Chad Lord has seen that shift up close. As senior director for water policy at the National Parks Conservation Association, Lord serves as co-facilitator of a water policy work group for the Clean Water for All Coalition.

Thanks to the caucus, he says, “There’s a deeper appreciation not only for equity, but for inclusion. The caucus brings the voices of these amazing men and women—these water warriors—into the bigger conversation.

And when you are inclusive, your focus and your policies change. That's definitely happening, and it's been a win for everybody involved.”

The focus on equity and inclusion has also led to concrete policy wins. Caucus members helped secure increased funding for clean water in 2019; contributed to pending human rights legislation that would prohibit water shut-offs for low-income households; and won new provisions in the pending reauthorization of the Water Resources Development Act that require the Environmental Protection Agency to document water affordability issues and develop remedies in the next year.

And at a time when the environmental movement has been described as being dominated by overwhelmingly white “green insiders,” the caucus is strikingly diverse—demographically and otherwise. Its members hail from cities and rural communities in every region of the country, and they address a wide spectrum of issues.

“You have folks fighting for affordability and clean water and infrastructure,” Chapman says. “And they are all saying, ‘Wait a minute—something’s not right here.’ That basic concern for water is what unites us.”

Through shared understanding and purpose, the Water Equity and Climate Resilience Caucus helps members transcend differences that might otherwise divide them.

“There has been so much solidarity built,” White-Newsome says. “It goes across racial lines, it goes across geographic lines, it goes across scales and sectors—and that is pretty powerful.”

Developers Know How to Dodge Environmental Reviews; Now They Might Have Help From Trump

CYNTHIA GILES AND JANET McCABE

Originally published March 17, 2020 in Inside Sources

The Trump administration is making good on its threat to weaken the country's environmental laws by proposing sweeping changes to the National Environmental Policy Act (NEPA).

This 50-year-old law forms the bedrock of federal environmental protection; it requires that federal agencies take a hard look at potential effects to air, water and other shared resources before a project—be it a highway or a gas pipeline—is approved.

We led the offices at EPA in charge of NEPA reviews and air pollution for eight years. In our experience, developers and other project proponents routinely try to dodge the scrutiny NEPA requires. But now, the Trump administration's proposed rule would embrace these common avoidance strategies and enshrine them in federal regulations.

Here are a few favorite dodges from the developers' playbook:

Dodge No. 1: The Blinders.

This dodge involves focusing on the area that will be directly disturbed and ignoring other likely effects. Let's say your project seeks to raise the height of a bridge at a port entrance to accommodate much larger ships, carrying three times more cargo than is currently possible. The blinders-wearing perspective says you only have to look at the effect of installing new pilings to support the bridge, called "direct effects" under existing NEPA rules.

But common sense says that tripling the cargo will require many more trucks to haul it away, which will significantly increase air pollution in

the surrounding neighborhoods. Under current rules, NEPA analysis has to consider that additional air pollution as an “indirect effect” of raising the bridge. If you lived next to the port, those effects might not seem so “indirect” to you and your family.

Dodge No. 2: The Bubble.

Those who use this dodge pretend the proposed project exists inside a bubble, where it is the only thing that has or ever will be built. In real life, of course, each new project joins a crowded landscape of existing polluters. That’s why NEPA asks whether a proposed project will add to such “cumulative impacts.”

We know, for example, that the Gulf of Mexico is choking from the huge load of nutrients from agriculture and other sources that the Mississippi River sends southward. Should a project that proposes to dump more nitrogen into the gulf be able to ignore the huge dead zone that is already there? The depressing spinoff of this argument, often adopted when ignoring cumulative impacts is impossible, is to claim that because the cumulative impact is already so terrible (the gulf is doomed!) that the project doesn’t even matter. This is the anti-NEPA: things are so bad we should just give up.

Dodge No. 3: Not My Problem.

This dodge may dismiss potential effects because they will happen far away. (Hey you downstream people near the gulf: not my problem!) Or it may ignore effects that won’t happen immediately. (It will take a few years for all those polluting trucks to appear at the port, so not my problem!) Or the perennial favorite to duck responsibility for greenhouse gas emissions: everyone is doing it. (This one project can’t solve the entire global problem of climate change, so definitely not my problem!)

The proposed changes to NEPA would essentially write these dodges into law, by:

- Focusing required reviews on what used to be called “direct” effects and removing references to “indirect effects,” leaving it up to the project proponent to decide whether to consider effects that are “later in time or further removed in distance.”
- Announcing that analysis of cumulative effects is no longer required. So sorry, Gulf of Mexico.

- Refashioning NEPA as the Not my (Environmental) Problem Act: no need to look at effects happening later, farther away or as a result of a more involved causal chain. Such as, of course, climate change.

The anti-regulatory zeal that underlies this proposal is evident throughout. It has nothing positive to say about the environmental progress NEPA has inspired, and instead views NEPA as only a burden and expense. It undercuts accountability at every turn.

And then, just in case there is any doubt about who is in charge, the proposed rule throws in this kicker: let the applicants do the environmental analysis themselves. That's right! No need for those pesky government agencies. Hand the government pen to the companies that would profit from the projects.

With this provision, the Trump administration abandons any pretense that the rules are there to protect the public and the environment.

In its effort to undermine anything that could stand in the way of a project—especially any obligation to consider climate change—this proposed rule sweeps away many provisions that for decades have protected communities from serious environmental effects and destruction of important ecological, historical and cultural resources.

What it does not do is make the case or, indeed, provide any evidence that weakening NEPA will make projects go faster. The Trump administration claims that new NEPA regulations are necessary to speed up projects, but the proposal ignores government studies showing that NEPA isn't a major reason for project delays.

The proposed rules would be harmful to any person who has benefited from the cleaner air and water and the government accountability that NEPA has so powerfully advanced. Which is to say, everyone.

NEPA is the exemplar of transparent government decision-making and a pillar of the U.S. environmental movement. It arose in response to public outcry, and it may still be protected the same way.

SECTION II

SUSTAINABLE CITIES FOR ALL

It's Time to Talk About Moving Cities in the Face of Climate Change

JEFF PETERSON

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In the last Democratic presidential debate, Minnesota Sen. Amy Klobuchar fielded a question about whether rising seas and other climate change risks would force cities to move. “I very much hope we’re not going to have to relocate entire cities,” she responded. Most Americans would agree that coastal cities are simply too big to move and thus will stay pretty much where they are, perhaps with fortified sea walls or some modest retreat from the lowest ground.

Could that change? Might there come a day when some coastal cities decide that fighting to stay, come hell or high water, is simply not a sustainable strategy? It is hard to imagine, but there are several factors that may eventually shift thinking from staying at any cost to moving at a high cost.

Climate change is delivering a one-two punch of more severe storms and rising seas to coastal cities. In 2017, three major storms—Hurricanes Harvey, Irma and Maria—generated some \$265 billion in damages and more than 3,000 deaths. Scientists predict that coastal storms will become more intense, bringing widespread flooding as a result of higher storm surges.

A warmer climate is also melting glaciers and ice sheets and accelerating the rate of sea level rise. Unlike storm flooding, the coastal flooding that comes with rising sea levels occurs everywhere and comes to stay. Globally, sea levels are likely to rise between 1 and 4 feet by 2100 and could rise by as much as 8 feet in a worst-case scenario. And seas will keep rising for several centuries after 2100, with as much as 30 feet possible by 2200.

American coastal cities face varying degrees of risk from storms and rising seas over the decades and centuries to come. Also varied are the financial resources available to pay for response actions. What people in all these cities have in common is a strong attachment to the place they call home. Not only do people want to stay, coastal cities represent huge investments in public infrastructure and private property and the logistics and costs of moving are daunting.

Today, the common experience with coastal flooding is that water rises due to a storm and then retreats. Damages are repaired and rebuilding can begin, perhaps with elevated structures and hardened defenses. It is human nature to want to repair and replace homes or communities lost to random acts of nature.

In the decades ahead, the coastal flood experience will change as rising sea levels push more severe storms farther inland and permanently inundate some coastal areas. Permanent inundation could make rebuilding on the old site impractical from the point of view of utilities, emergency services and daily living. As coastal flooding is recognized as permanent inundation, the determination to rebuild at the same location will fade.

At the same time, sea walls and other structures built to provide protection from rising waters come with big limitations. Although sea walls have a reassuring quality of engineered permanence, getting the size right is hard. Bigger sea walls will work longer but cost much more. And, a sea wall can work for a time, but in the long term, even a monster sea wall will not be enough to save some cities.

As major coastal protection projects take a larger and larger share of city budgets, other city services, such as schools, transportation and housing may suffer and quality of life decline. The high costs and foregone services that come with these projects will force governments to make hard decisions about which areas to protect. Areas with high property values might look like the best investment, but low-income communities may strongly object to being offered less or no protection.

It seems likely that, faced with costs of building ever-higher sea walls to protect everyone, even the wealthiest cities will seek help from the federal government. With requests for major funding from rich and poor communities, the federal government will need to decide where and how

to spend limited funds. Given that sea walls are often at best a temporary solution, federal taxpayers may be wary of major investments.

Federal taxpayers may be circumspect of more than costs. Structural protection projects for big cities will need to be coordinated with neighboring communities with fewer resources. Without a coordinated approach to the shape of the coastline, it is hard to maintain efficient transportation networks and other infrastructure. Decisions about how to support inland migration of beaches and wetlands as sea level rises become more complicated.

Unsatisfactory experiences with structural protection may make the idea of moving look a bit more attractive. Having a good plan for where to relocate might make moving look even better.

A new place should not just be safer, it should feel like home. American coastal cities are rich in culture and diverse communities. This social capital—the heart and spirit of a city—need not be lost even if the physical infrastructure is left to rising waters. A key challenge for the future is developing creative ways to transfer the social capital of coastal cities to safer locations.

The obstacles to moving even part of a major city to safer ground are legion. In addition to saving the heart and spirit of a community, a new location must be found, the nuts and bolts of infrastructure and utilities need to be designed, property rights must be considered, and the interests of neighboring communities and ecosystems need to be addressed. The financial costs are intimidating, although likely less in the long run than failed sea walls followed by inundation.

Microsoft Corporation is famous for asking job applicants, “How would you move Mount Fuji?” The question suggests that there may be answers to impossible-sounding problems and that a first step toward doing the impossible is asking how it might be done. Can a major coastal city successfully relocate to a safer place? We do not know. But, the stakes for America’s coastal cities are high and it is time to ask the question.

Sustainability in a Small Place: The Spanish Basque Country as a 21st Century Model

BRUCE RICH

Originally published January 6, 2020 in openDemocracy

The 21st Century is not working out the way many of us hoped: we witness the failure of nations and politicians to address the climate crisis, as well as social unrest in many countries over the failure of a neo-liberal economic model that has neglected social equity and environmental sustainability. The *Financial Times* has even called for “a more sustainable and inclusive form of capitalism.”

To put these aspirations into practice, we could learn something from an entrepreneurial nation of a little over two million people, where the ratio of high wage manufacturing to Gross Domestic Product is double that of the U.S., and 16 percent higher than Germany or Japan. It has the fifth highest life expectancy on the planet (at 83.5 almost five years longer than the U.S.) and exports sophisticated machine tools to Germany and high-tech components for interplanetary space probes to NASA.

No, it's not Denmark, but the autonomous Spanish Basque Country (*Euskadi* in Basque).

Over several decades Euskadi has transformed itself into one of the most internationally competitive, socially inclusive, environmentally progressive economies in the world. It is a polity that welcomes economic globalization as an opportunity, while reaffirming local community and cultural identity. It has achieved a degree of income equality higher than Denmark or the Netherlands, and a per capital GDP on the same level as Sweden. The Basque Country has reinvented its industrial metropolis,

Bilbao, as a model of a post-industrial high-tech economy. Despite inheriting an energy sector heavily dependent on imported fossil fuels, since 1995 it has reduced greenhouse gas emissions by 12 percent while GDP increased 70 percent, decoupling economic growth from greenhouse gas (GHG) increases. A significant part of Euskadi's world-class manufacturing is organized in workers' cooperatives, such as the Mondragon Group, the world's largest consortium of worker-owned enterprises and Spain's tenth largest company.

The key to these Basque successes is multifaceted: social solidarity rooted in a persistent culture of national and linguistic identity, coupled with a long history of entrepreneurship and trade. Euskadi also benefits from a unique, decentralized, autonomous finance structure where most tax funds are raised, administered, and spent in its three small provinces, increasing the likelihood that social goals are actually implemented, rather than dissipating through the bureaucratic intermediaries of a larger centralized national state.

The recovery of culture and history as tools to deal with globalization

One of the best guides to understanding Basque values is the second American President (1797-1801) John Adams, who cited Euskadi's legacy of democratic self-governance in a work published in 1787 calling for a new constitution for the United States:

“While their neighbors have long since resigned all their pretensions into the hands of kings and priests, this extraordinary people have preserved their ancient language, genius, laws, government, and manners... Many writers ascribe their flourishing commerce to their [geographic] situation; but...that advantage is more probably due to their liberty. In riding through this little territory, you would fancy yourself in Connecticut; instead of miserable huts, built of mud, and covered with straw, you see the country full of large and commodious houses and barns of the farmer; the lands well cultivated; and a wealthy, happy yeomanry.”

The Basques were already an ancient people in Roman times, and unlike other Iberian peoples they conserved their grammatically complex, non-Indo-European language. During the Roman period and afterwards, when the Germanic Goths invaded the Iberian Peninsula, the Basques governed themselves through customary law and practices known as *fueros*. As the different fiefdoms and regions in the Iberian Peninsula consolidated

to form the Spanish state in the late Middle Ages, the Spanish monarchs pledged to respect the Basque *fueros*, visiting periodically the Basque village of Gernika (Guernica) to renew this oath underneath an oak tree where neighboring communities would meet to debate local concerns. Over the centuries Guernica became the symbolic ground zero of Basque self-governing traditions and national identity.

Feudalism mostly bypassed Euskadi; Basque culture evolved in independent farmsteads known as *baserri*, in turn organized in hamlets (*auzoa*) of ten to thirty farmsteads, with shared community labor obligations (*auzoalana*). For over a millennium Euskadi was one of the shipbuilding centers of Europe, already incorporating Viking shipbuilding techniques in the 10th Century, and constructing most of the galleons of the Spanish fleet that dominated the world's oceans in the 16th Century. Near Bilbao is a small mountain of extremely pure iron ore, already mined by the Romans, that supplied an iron and steel industry which provided much of the iron consumed by Britain in the 19th Century. Along with Catalonia, Euskadi was the first region to industrialize in Spain.

Up through the 19th Century the Spanish monarchs continued to respect the *fueros*, of which the most important was one banning the Spanish state from levying direct taxes. Taxes were collected and spent locally by the Basque authorities coupled with an agreed upon annual sum for Madrid that was periodically renegotiated. In 1936 the fledgling Spanish Republic granted fuller autonomy to the Basques, who established a regional government lasting only a few months before a fascist military revolt led by General Francisco Franco overthrew the Republic. The Basques supported the Republic, and Franco asked his ally Adolf Hitler to unleash the German Luftwaffe in a massive carpet bombing of Guernica on April 26, 1937—a market day when thousands of people from surrounding communities were in the streets.

The Franco regime suppressed Basque identity, outlawing the use of the Basque language, criminalizing the display of the Basque flag and even forbidding Basque parents from giving their children Basque names. Following Franco's death, a new, democratic Spanish constitution in 1978 restored substantial autonomy—particularly fiscal autonomy—to Euskadi. The Basque government today oversees the Basque Autonomous Region, which consists of the three provinces of Biscay, Álava, and Gipuzkoa, with a total population of around 2.2 million.

A condition of Spanish entry into the EU was eliminating Franco's protectionist economic policies. The Basque Country and especially Bilbao (with nearly half of Euskadi's population) encountered a precipitous economic crisis in which centuries old industries virtually collapsed. Unemployment reached 26 percent by the early 1990s, accompanied by problems such as drug addiction and the spread of HIV. Meanwhile, the terrorist group ETA pursued total Basque independence through bombings and murders of police and Spanish government representatives. ETA only declared a permanent ceasefire in 2011, and announced its disbanding in 2018.

In a period when Margaret Thatcher and others proclaimed "there is no alternative," Euskadi pursued policies quite at odds with the neo-liberal, market fundamentalism that influenced many countries. First, it undertook a comprehensive government industrial policy, in close cooperation with the private sector, to increase high-tech manufacturing in clusters of companies, technology institutes and research centers in areas such as machine tools, aeronautics, automation, transport and logistics, environmental industries etc. By 2005 the Basque country had ten applied technology centers, thirteen research and development centers, four research laboratories, two public research organizations, and three technology parks. Second, it expanded social and welfare services to lessen inequality and promote social inclusion at a time when many countries were retrenching social support.

On these two pillars Euskadi began at the beginning of the 21st Century to promote a model of environmentally sustainable human development.

A legacy of solidarity

By the second half of the 20th Century Basque traditions of solidarity also fostered one of the world's strongest worker cooperative movements. Worker-owned cooperatives, companies, and associations now account for around 10 percent of all jobs in Euskadi, and 17 percent of exports. Mondragon Cooperative Enterprises was founded in 1956 by five former students of a priest inspired by Catholic and socialist ideals, José María Arizmendiarieta. Today with more than 80,000 employees worldwide and sales of over 12 billion euros annually, it consists of some 261 separate organizations in 31 countries, of which 105 are cooperatives. Mondragon companies manufacture and export machine tools, telecommunications

equipment, computer chips, solar and wind energy equipment, and automobile components, to name a few.

Mondragon and the cooperative movement emphasize that economic development is not an end but a means to human and social fulfillment. Workers are co-owners and the salary differential between the lowest paid worker and highest paid manager in a cooperative can be no higher than 1:6. In Mondragon coops major decisions must be approved by General Assemblies, where all members from CEOs to lowest paid workers have one vote. If a Mondragon cooperative needs to reduce its workforce, the group ensures that workers are retrained and placed in one of the other cooperatives.

But Mondragon and the cooperative movement face increasing pressures to remain competitive internationally. Management has outsourced new production and distribution to affiliates in lower wage countries, and only around 40 percent of group workers are full-fledged owner-members in the cooperatives, located mainly in Euskadi. Mondragon also now includes 143 affiliated companies in 31 nations—including 20 in Mexico and 21 in China, and 6 in the United States. Almost none are cooperatives, so in effect the group has two kinds of corporate citizenship—one, more privileged, imbued with socially progressive rights in the coops, and a second tier of conventional companies in the rest of Spain and abroad.

Moreover, Basque researchers examining Mondragon and globalization found that “managers ... are often more committed to efficiency than to the cooperative culture.”

Mondragon’s recent problems may be early warning signs of risks to Euskadi’s deeply rooted egalitarian traditions. Nonetheless, these same values continue to be reflected in initiatives of the government and private sector to integrate environmental sustainability into all areas of Basque society.

Towards an equitable, environmentally sustainable future...

The Basque government has reoriented its national budget planning around the 2030 United Nations Sustainable Development Goals (SDGs), which sets 17 ambitious social and environmental targets including cross cutting climate mitigation and adaptation goals. It’s established 55 natural protected areas covering 23.3 percent of the region’s land area (compared

with 18 percent for the EU as a whole). The current President (Lehendakari) of the Basque Country, Iñigo Urkull, declared that the Euskadi's commitment to the SDGs reflects Basque values of “auzoalana, cooperation and a shared workload” for the local and global “common good.”

The environmental education programs of the Basque government have been identified by the United Nations as leaders in international good practice. The sustainability curricula of the “School Agenda 21” program encourage students to identify recommendations which they share in meetings with other schools and then present before local mayors and town councils. The Basque environmental ministry has prepared “quick guides” for journalists on climate change and green public procurement, with another on the circular economy in preparation.

Euskadi has established the “Circular Basque network of companies and organizations; already between 2000 and 2016 the Basque economy grew by 26 percent, while the consumption of materials decreased by 25 percent and the volume of urban landfill waste decreased by 56 percent. The Basque Circular Economy Strategy for 2030 aims to further increase recycling and remanufacturing by 30 percent and reduce waste generation per unit of GDP by 30 percent.

Global responsibility at the local level: the Basque climate change strategy

The “Climate Change Strategy of the Basque Country to 2050” (Klima 2050) was endorsed at the 2015 Paris climate summit in Paris as one of the world's 24 leading public programs for achieving a climate resilient, low-carbon economy. The preparation of the strategy involved comprehensive public participation, including online input through Euskadi's “open government” website, Irekia.

Klima 2050 aims to reduce Basque GHG emissions by 40 percent by 2030 from 2005 levels, achieving carbon neutrality by 2050, stronger commitments than the EU as a whole, or New Zealand and Canada (though many argue 2050 is too late). Fossil fuel use is to be replaced by electric power from climate friendly sources (especially in transport), coupled with comprehensive initiatives in energy efficiency, promotion of cogeneration, “smart grids” and “smart meters” in Basque municipalities, as well “zero emissions” smart building construction.

Klima 2050 will enhance the Basque economy's international competitiveness. It estimates annual costs for the first five years of 84-91 million euros, more than compensated by 57 million euros a year in additional gross economic activity (including the creation of over 1000 jobs), yearly energy use savings of 55 million euros, and health savings of as much as 32 million euros. The point that many environmental investments more than pay for themselves in advanced economies is one that has been evident for years, but sadly often ignored in politicized debates in the U.S. and other countries.

The Basque success

In recent years Euskadi has soared in international rankings of wellbeing. In 2017 the Basque Country ranked 8th in the EU in per capita income, 21 percent above the EU average, ahead of France, the United Kingdom, Belgium and Finland, and Spain as a whole. The Basque Country substantially outperforms the U.S. in many areas of social and economic welfare, including life expectancy, access to public health services, and income equality.

Euskadi also ranks highly among industrialized nations in education levels, and 26 percent of advanced degrees are in STEM (Science, Technology, Engineering, and Mathematics) areas, double the proportion (13 percent) for the both the European Union and the United States. It ranks near the top of the EU in innovation capacity.

In 2013 Euskadi ranked number four among the world's nations in the "Environmental Performance Index" developed by Yale and Columbia Universities. Basque opinion polls show virtual unanimity that protection of the environment is "very important" or "quite important"—higher than Germany or the United Kingdom (both 94 percent). The Basques see no trade-off between environmental protection and economic welfare: 82 percent strongly or completely agree that environmental protection promotes economic progress rather than hindering it.

Conclusion: is another way possible?

Is the Basque case replicable, and is it sustainable? Like anywhere else, there are problems and challenges: Euskadi's unemployment is the lowest in Spain, but high compared to Northern Europe or the U.S.: 9.3 percent (nearly 30 percent for youth under 25). The cooperative ideal faces pressures from global economic competition and the social entropy of

traditional solidarity. How will Basque social coherence and values fare in a new era of forced migration catalyzed by climate change, geopolitical instability, and economic desperation in many areas of the world? Euskadi has few migrants compared to the rest of Spain and many Western European regions, but these migrations have just begun.

Euskadi's cultural history is unique. But similar progressive values are embodied in myriad local legacies around the world. In the U.S. there are many examples such as New England town meetings, or progressive movements of states like New York and California, reflected in California's leadership in many environmental areas. The U.S. federal system leaves ample fiscal space for raising and spending tax funds at the local (municipal, county, and state) level.

The Basque example is a work in progress, but there is a lesson for all of us: social and environmental solutions inspired by broader national and international policies are sometimes, and perhaps often, best realized through local empowerment and local democracy. A recent comparative study of "Minority Self-Government in Europe and the Middle East" cites Basque environmental progress for showing how "autonomous regions... are more dependent than central governments on long-term investments, while offering a better record of transparency, reliability and political legitimacy." In the words of former Basque President (1999-2009) Juan José Ibarretxe, "Today, in the 'global society' it is 'the local' that embodies real hopes that another world is possible."

5 Rules for Cities Bracing for Dramatic Change

PATRICK M. CONDON

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Three great waves are crashing against global cities, changing them before our eyes. First, the global migration from rural areas to cities, causing out-of-control urban growth and the abandonment of rural towns and villages. Second, the collapse of birth rates in much of the world, which foretells shrinking national populations even while major cities expand. (Total population is already shrinking in Italy and Japan, leaving empty villages; the U.S. could be next). Third, and adding even more disruption, is the ongoing decline of the middle class, which is fueled by ever-growing inequality.

This rapid rate of growth and change will continue until population stabilizes sometime around 2060. We have only a short time, then, within which to first understand and then to adapt to these altered circumstances. The five rules below provide at least a window into how we might first think about these changes, and how we might act to capitalize on them. A better life for urban citizens is at stake.

Rule One: The city is a living thing, not a machine

Great cities grow organically. The result of millions of individual human actions, each action influenced by what came before and in turn influencing what comes next. New York's Manhattan, for example, has a unifying structure of gridiron streets, organizing many thousands of privately owned small parcels. This form of street and parcel is akin to the structure of veins and cells of a leaf—and many other organisms. This structure allows for the systems of the city (transport, finance, development, culture) to function continuously over the centuries even as the contents of each building parcel changes again and again. Understanding the city as a living thing helps policy makers and citizens avoid harming the subtle organic functions of the city. Jane Jacobs in her seminal 1964 book *The*

Death and Life of Great American Cities was the first to articulate this reality and in doing so revolutionized city planning.

Rule Two: Cities have patterns

Cities as organic systems are not random. Like any life form, they have unique patterns. Understand the pattern and you understand the organism. Respect it and you can capitalize on its energy. Savannah, Georgia, has a classic street gridiron relieved by its park blocks. Greek island villages have unique patterns that arise naturally from the landscape—a pattern driven by the process of taking local materials and shaping buildings and streets by hand, with streets always following the gentle rise or fall of the landscape, akin to the way a cow path might cross a field. Greek island villages also include patterns of pathways up steep slopes, mitigated by arches and stairs. Completing the pattern are whitewashed buildings made from local stone, filling every available inch, leaning one against the next to create an exquisite yet informal composition of great beauty. The interaction of human action and the specifics of site and materials is always discernible in urban pattern. Designers and planners can capitalize on these patterns if they recognize their importance. Christopher Alexander devoted a lifetime to formulating a recognition of these patterns in the city and providing designers with tool kits for building with them, notably in his seminal book, *A Pattern Language, A Timeless Way of Building*.

Rule Three: Green the infrastructure

The financial and ecological constraints that cities must withstand impel us to use a lighter and more intelligent hand with infrastructure; systems of roads, pipes and wires that are lighter, smarter and more affordable. That means infrastructure that is physically lighter (less concrete, less cost, less environmental impact) and usually more beautiful (a winding rural road with a colonnade of overarching sugar maple trees, for example). South American cities have pioneered this approach: Curitiba, Brazil, with its inexpensive and miraculously efficient rapid bus transit system, and Medellín, Columbia, with its affordable aerial trams serving formerly inaccessible informal settlements, are two of the best examples.

Rule Four: Strengthen social resilience through affordable housing design

Housing can often take up more than 80% of all urban lands—thus in the health of housing districts is the health of the city. Yet as inequality worsens, housing is increasingly unaffordable for many—a crisis point of

economic inequality, not just in the developed world but worldwide. It is time to consider a model that treats houses as homes, not as investments. Vienna has a 100-year track record of supplying successful non-market housing, such that over 50% of that city's residents live in a permanently affordable home. Not only that, but the presence of such a strong non-market housing sector has driven down the price of market housing, too. Market homes in Vienna cost less than half the price of equivalent homes in comparable cities, like Paris.

Rule Five: Adapt to shifts in jobs, retail and wages

Globalization and increasing inequality are eroding job security and income for many workers. The rise of the gig economy, for better or worse, is already changing the face of cities. Informal settlements provide a clue about the future of work and the richness of opportunity they can allow. Dharavi in Mumbai, India, is an example of a place where billions of dollars of economic value are added in the midst of what some call a slum. This district, with 1 million inhabitants and nearly as many commercial and manufacturing enterprises, sits on land only two-thirds the size of New York's Central Park. Yet no building in this self-built zone is higher than three stories (belying the belief that high density means high rise structures). Echoes of this type of human entrepreneurial fervor is increasingly evident in more formally organized urban areas, even in the U.S., often hidden in garages or basements or converted loft spaces. We can expect to see, and indeed are already seeing, much more of this kind of job-and-life connection. While ensuring robust protections for residents, workers and the environment, cities can encourage these ambitions as we struggle to adapt our cities in times of financial stress.

Restoring Our Hidden Rivers: Revisiting Urban Waterways with New Eyes

JENNY HOFFNER

Originally published March 3, 2020 in Nonprofit Quarterly

Sometimes, if you listen close, you can hear the creeks running in storm drains under our feet. Occasionally, you can even see them.

Many of our world's modern urban rivers are hidden, a place apart. They are forgotten spaces and, given their anonymity, they sometimes coexist unknown and protected. More commonly, they are abused, polluted, and compromised due to a lack of love and stewardship. Often, they hide in pipes under parking lots, streets, and highways.

Urban rivers that have been forgotten or buried underground for years often wind their way through neighborhoods that also have been forgotten, marginalized, or intentionally burdened with infrastructure like landfills, power plants, and sports arenas that damage the quality of life for residents.

For example, in and around the busiest airport in the world, Atlanta's Hartsfield-Jackson International, the Flint River can be found running through pipes under parking lots and runways. Many of the neighborhoods that once stood there, and the people who once called those neighborhoods home, are long gone, bought out in favor of airport expansion.

Until we can address both the marginalization of rivers and of their neighbors, it will be impossible to create thriving communities with healthy rivers and clean water for all. Healthy rivers and communities share similar attributes, including diversity, interconnection, productivity, and resilience. And the health and vitality of both are intertwined.

When streets flood with polluted stormwater and sewage spills into basements and backyards, community and river health are at risk. Why?

Because our sewers carry everything that's gone "down the drain," including human waste, household chemicals, and pharmaceuticals—which can harm human and ecological health. Untreated human sewage alone can contain infectious diseases such as salmonella, hepatitis, dysentery, and cryptosporidium. Likewise, sewage can cause algal blooms in rivers, destroying habitat for fish and other aquatic organisms.

The problem is compounded when wastewater sewers are coupled with storm sewers. These "combined sewers," which the US Environmental Protection Agency reports are in operation in 860 cities serving 40 million people, also end up carrying pesticides, fertilizers, automotive chemicals, and trash that rain washes off the streets. Moreover, the sheer volume of stormwater can quickly overwhelm these aging and undersized pipes, resulting in this toxic cocktail backing up into basements, spilling into streets and parks, and pouring into rivers and streams. All told, while precise determination of the cause of waterborne illness is often not possible, researchers conservatively estimate that sewer overflows sicken thousands of Americans each year.

The remedy: equitable urban river restoration, which recognizes the value of both the people and the river—and connects them together for impact.

In my experience, there are four critical components needed to successfully move an equitable urban river restoration forward:

- discovery;
- engage imagination around the possibility for transformation;
- successful, tangible projects connected to community and other stakeholder priorities; and
- sustainable constituency with community leadership and shared decision-making

Discovery is the active uncovering of something lost, unknown, or simply hidden from sight, invisible. Discovery connects people to the river, creating opportunities for deeper connection. Sometimes that connection happens through a creek-finding walk, cleanup, or, if possible, a paddle

trip. The focus of the Finding the Flint project, as the name implies, is exactly this—encouraging, inspiring, and enabling people to connect with the Flint River around and under Atlanta’s airport. Connecting in this case happens by taking a bike tour, testing water quality, or walking the headwaters. It even involves looking down storm drains in parking lots.

Discovery is also an unpacking of the history of the river and the community. Understanding the reasons why the river in this community looks different from the river upstream or in other neighborhoods is critical in piecing together the way forward.

It is important to consider the history of systemic racism that built the city and the neighborhood, the systematic racial injustices that perpetuate marginalization, including the devaluing of the neighborhood, the people, and the river. When the young people at Youth Ministries for Peace and Justice (YMPJ) saw their Bronx River in the South Bronx and then visited the same river further north in the whiter and more affluent Westchester area, they rightly asked the question, why? Why is the river so polluted and blocked off in our section, when it is beautiful and accessible elsewhere?

Once the river, the community, and their shared history are known, the next opportunity is to *engage imaginations around the possibility for transformation*. It is challenging to imagine that the river or the community can be anything other than what it already is. It is in this step that partners are invited to envision, to dream, and ultimately, to plan for a different future.

With the Bronx River, a small grants program provided resources to support new ideas for how to connect to and transform the river. The grants made it possible for the YMPJ youth to study the environmental justice history of their neighborhood and the river. They imagined a different kind of river in their neighborhood and took the first steps to make it possible.

The grant also funded an ecologist with New York City Parks’ Natural Resources Group to make a site visit. Gazing out on an apocalyptic-looking scene with burned trees, dumped cars, and thousands of tires lining the banks of a derelict concrete plant, he was asked to consider partnering with YMPJ youth to restore the area to a healthy ecosystem and help

create a park. While daunting, he was inspired by the vision and excited by the potential for transformation.

To engage and sustain involvement of a critical mass of stakeholders, people need to believe that change is possible and achievable for their community. This is a heavy lift in low-income neighborhoods and neighborhoods of color where many promises have been made and few kept, and where positive changes in keeping with a community-sourced vision are often rare or non-existent.

Implementing successful, tangible projects connected to community and other stakeholder priorities is the third step. This means first identifying and communicating community priorities. In the case of Intrenchment Creek in Atlanta, the Turner Field Community Benefits Coalition conducted a survey of over 1,000 households to find out what they wanted to see as part of a neighborhood redevelopment project and determined that the top priorities for the community included addressing flooding and combined sewer overflows and getting a grocery store in the neighborhood. These recommendations were codified in the Stadium Neighborhoods Livable Centers Initiative and are now being implemented through the Intrenchment Creek One Water Management Task Force, convened by American Rivers, ECO-Action, the city's department of watershed management, and Carter, the project developer.

With this step, it is important to demonstrate that the community can meet its goals while restoring the river. In most cases it means securing resources to make the changes envisioned. In the Bronx, for example, YMPJ prioritized the concrete plant site for public access to the river. YMPJ then partnered with Natural Resources Group—the ecologist mentioned above—and, with a grant from the National Oceanographic Atmospheric Administration, created a makeshift nursery to grow Spartina and other native plant species that they planted in the river together. This project transformed an abandoned lot as well as the river itself and provided inspiration and momentum to build on.

Lastly, it is critical that a ***sustainable constituency with community leadership and shared decision-making*** is in place to implement the long-game work of restoring a river and transforming a community. In most cases, the degradation and marginalization of urban rivers and their neighborhoods took generations. This means that it will take some time

to create thriving, healthy rivers and communities again. To sustain the work in the long run, it is essential that a dedicated and organized group of stakeholders commit to implementation of the vision, projects, policies, and processes needed to make the envisioned changes.

The Bronx River Alliance (Alliance) offers an inspiring example. The Alliance was created to address four programmatic areas: ecological restoration, greenway development, education, and outreach. Committees focused on each of these areas are open to community members and other partners' groups and agencies. The committees select their leadership and those leaders then become members of the Alliance's board of directors. In this way, there is a codified path for community members to be part of the board on an ongoing basis. Rather than the board being separate and self-perpetuating, it must respond to and engage with the perspectives brought from the community and the broader Bronx River constituency.

We have historically treated the community as separate from the watershed, from the river. We can't do that anymore. Restoring an urban river can be daunting, particularly when the river is invisible or inaccessible. Until the fate of the river and the community are connected, we will not succeed in equitably restoring or transforming either. We must address both the marginalization of the river and the marginalization of the community in order to create thriving communities with healthy rivers and clean water for all.

Build Infrastructure for the Future

LAURIE MAZUR

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On an ordinary day, you probably don't think much about infrastructure. You twist a knob, and clean water flows from the tap. The daily commute is uneventful. Wires transmit electricity, powering everything from dialysis machines to Netflix.

The mechanisms that enable these wonders remain—for most of us—out of sight and out of mind.

But, in twenty-first-century America, that may be changing. There are the epic failures: drinking water poisoned by lead or algae; commuter train derailments; collapsing highway bridges and pedestrian walkways. And then there are the daily frustrations, including gridlocked traffic, power outages, and rising utility rates. These failures, big and small, illuminate the dire state of our nation's infrastructure.

In 2017, U.S. infrastructure received a dismal “D+” in a quadrennial report card issued by the American Society of Civil Engineers. According to ASCE, we'll need to spend \$2 trillion over ten years to bring water, transportation, the electric grid, and other systems up to a passable “B.”

Consider the systems that deliver clean water to your tap. Many of those pipes and pumps date back to the Eisenhower Administration—or, in the case of some plumbing in Washington, D.C., to the era of the Civil War. There are some 240,000 water main breaks in the United States every year, which waste more than two trillion gallons of treated drinking water.

While infrastructure needs are growing, federal support has shrunk, aside from a brief flurry of spending funded by President Barack Obama's stimulus package in 2009. The federal government's share of capital spending on water infrastructure, for instance, fell from 63 percent in 1977 to just 9 percent in 2014.

In cities with aging water systems, utilities are raising rates to make up for declining federal investment. The lowest 20 percent of income earners now pay up to one-fifth of their monthly income on water. In Detroit, thousands of families had their water shut off in 2018 when they couldn't keep up with skyrocketing bills.

Worse, estimates by the civil engineers organization do not factor in climate change, which is now upon us. As the world faces a ten-year deadline to radically reduce greenhouse gas emissions to avoid catastrophic warming, the transportation and power sectors together account for nearly 60 percent of U.S. emissions. Every time a highway is widened or a new coal-fired power plant built, we are doubling down on fossil-fuel dependence—and locking in high emissions for decades to come. We need to replace or augment current systems with carbon-light alternatives.

At the same time, our infrastructure must be retooled to withstand the climate impacts that are now inevitable. Communities are confronting problems they've never seen before, like extreme heat in Montana, annual "500-year" rain events in Houston, and "sunny-day flooding" in Norfolk, Virginia, and Miami. The impacts of climate change are already straining the nation's aging infrastructure, and the worst is yet to come—with low-income communities facing the harshest impacts. The Trump Administration nevertheless proposed a policy change that would exclude all climate considerations from infrastructure planning.

However, the challenges we face can be seen as opportunities. Reinvesting infrastructure could reconfigure American life by heading off the worst climate impacts, while also spurring job growth. "If we do it the right way, if we pair investments with smart labor policies, we can create and sustain the kind of good, stable union jobs that we know this country sorely needs," says Larry Willis, president of the AFL-CIO's Transportation Trades Department.

The federal government is key to transforming infrastructure because the scale of spending needed is on par with other massive federal undertakings, like continent-spanning railroads and highways, rural electrification—the original New Deal projects that succeeded because of forward-thinking leadership that galvanized the nation.

So, what would a progressive vision for infrastructure look like in 2020? Here are some guideposts.

For starters, every dollar spent on U.S. infrastructure must bend the arc of carbon emissions toward zero. On transportation, that means transforming our gas-guzzling car problem.

Most federal transportation spending now goes to surface roads through the Highway Trust Fund. But public transit is a much more energy-efficient way to get people from place to place. Notes Steven Higashide of TransitCenter, “A highway lane can carry about 2,000 people per hour per direction. Buses can carry four or five times that number. With rail, you can carry perhaps 25,000 people per hour.”

While it’s important to keep existing roads and bridges in good repair, a climate-smart transportation policy would “stop widening highways,” says Christof Spieler of the design firm Huit-Zollars. Numerous studies have shown that added highway capacity simply leads to more driving, along with more congestion and emissions.

“A single highway project is often measured in the billions of dollars,” Spieler says. “You can buy a lot of bus shelters for a billion dollars.” He advocates a much stronger intercity bus and rail network, coordinated and partially funded by the federal government. Spieler adds that by fully taxing trucks for their impact on highways, we could spur a rapid shift to freight rail.

In the power sector, the challenge is to complete the transition from fossil fuels to renewables, while radically improving the energy efficiency of our built environment.

The good news is that cheap, clean renewables are ascendant, while dirty coal-powered plants are being phased out. The price of renewables has fallen dramatically over the last decade, while game-changing battery storage provides steady power when the wind doesn’t blow and the sun doesn’t shine. Still, thanks to the fracking boom and the enduring power of the oil and gas industry, the United States still gets 63 percent of its power from fossil fuels.

In the power sector, the federal government plays a lesser role, since most Americans get their electricity from investor-owned utilities. But the government could help speed the clean-energy transition by funding research, development, and pilot projects, and through tax credits and incentives, as the Obama Administration did to improve the energy efficiency of the nation's building stock. At the very least, the federal government could stop subsidizing the fossil fuel industry to the tune of \$20 billion a year, undercutting state-level efforts to promote clean energy.

The power sector must also transform to withstand the hotter, wilder weather of the future. In 2012, Superstorm Sandy left eight million homes in the dark—some for as long as a month—and last year, a Californian utility shut off power to hundreds of thousands of customers to avoid sparking wildfires. Our vast, sprawling power grid is so interconnected that an overgrown tree in Ohio can take out power for fifty million people along the East Coast.

According to Denise Fairchild of Emerald Cities Collaborative, a resilient power system includes distributed renewable technologies, such as solar, plus battery storage and microgrids that can keep the lights on in a crisis. The federal government could help states and localities by funding research and innovation to ensure that these technologies are affordable, accessible, and appropriate—especially for vulnerable communities.

Meanwhile, water-treatment facilities are typically built in the lowest-lying parts of communities, where they are vulnerable to sea-level rise and storm surges; these must be fortified with flood walls and backup power. The water sector, says Scott Berry of the U.S. Water Alliance, “needs to plan for a future that looks climatologically different from the one that we have right now. The management of water is going to be critical in adapting and building resilience.”

In some cases, nature is the most resilient infrastructure. Forests and wetlands absorb floods and filter drinking water; dunes and mangroves block storm surges. Protecting or restoring these natural services can be cheaper and more effective than trying to replace them with pipes and concrete. The federal government can help promote “green infrastructure,” such as protected areas, parks, and rain gardens for stormwater management and flood prevention. And it can tackle the perverse incentives that spur unchecked development in floodplains.

Given decades of inequitable funding for everything from transit to broadband, a progressive infrastructure plan must prioritize spending in underinvested communities, both to improve services and to create economic opportunity. And it can create a more equitable future by tying federal spending to workers' wages and benefits, labor rights, and community involvement.

“There’s got to be an equity plan so those communities most impacted are receiving the first dollars out,” says Fairchild. “And we need a collaborative planning process, where communities are at the table with the public planners and private developers.”

Investing in the right kinds of infrastructure can have far-reaching benefits. For example, a decentralized power-generation system could bring jobs and investment to communities that have been sacrificed to fossil fuels, from the ravaged mountain towns of Appalachia to the urban neighborhoods overshadowed by power plants and refineries.

Addressing the transit gap in low-income areas would have similarly transformative effects. A groundbreaking study by Raj Chetty and Nathaniel Hendren of Harvard University found that low-income families in counties with the longest average commute times had the slimmest chance of moving up the economic ladder. Connecting marginalized communities to jobs and opportunity is essential to closing the chasm between America’s rich and poor.

And while investing in transformative change, the federal government must relieve the heavy burden of utility costs on low-income families. It can create programs to help poor people pay for essential water and power, similar to those now in place for food and heat.



Trump’s ill-fated 2018 infrastructure plan offered just \$200 billion in federal funds; the remaining \$1.3 trillion was expected to come from private investors, states, and localities. But the private sector’s record on infrastructure is mixed. Investors won’t invest without the promise of high rates of return. And when private investment does occur, it can send costs soaring: In Bayonne, New Jersey, water bills rose almost 28 percent after private entities took charge of the city’s public water system.

But public-private partnerships can work—if government attaches the right conditions. When Prince George’s County, Maryland, teamed up with the engineering firm Corvias to launch its Clean Water Partnership in 2015, a performance contract set out two objectives: to improve stormwater management with green infrastructure, and to hire local small and minority-owned businesses to carry out the work. The partnership has so far met or exceeded all of its economic, social, and environmental objectives—on time and under budget.

To build an infrastructure for the future, we need to spend more. But we also need to spend smarter, by taking a systems approach to infrastructure. As Spieler puts it, “We should use every infrastructure project as a chance to solve as many problems as possible.”

A more holistic approach can save money while turning problems into solutions. For example, the city of Lille, in France, now powers its bus fleet with treated methane gas produced by its sewage-treatment plant and its organic waste facility. The federal government can help find similar solutions, by encouraging cross-disciplinary research and interagency collaboration.

Finally, we must protect our investments in infrastructure by making sure they are properly maintained—notes Hillary Brown of the City College of New York, “Nobody wants to put money into maintenance. They’d rather have a new bridge named after them. We’ve got to have a culture shift, because we don’t have the luxury of rebuilding these things when they fail every few years.”

The sorry state of our nation’s infrastructure has drawn back the curtain, revealing systems that are unsustainable and unjust. With that insight, we can rebuild for a greener, fairer, more prosperous future.

When Confederate Monuments Fall, Action-Based Empathy Can Create Inclusive Public Spaces

ELGIN CLECKLEY

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June 10 is a day I'll never forget. I had just walked away from chatting with a former architecture student I had the pleasure teaching at nearby University of Virginia. We met for a physical distancing chat, near the center of Charlottesville's Downtown Mall. Seeing the infamous Robert E. Lee statue a few blocks away, the student and I talked about Gov. Ralph Northam's order to remove a similar statue in Richmond in response to the national reckoning sparked by the murder of George Floyd.

I started to head east, looking up to the Paramount Theater, now holding the words "Black Lives Matter" on the marquee. Looking down, I realized that a white woman was approaching. She asked, "Can I say something to you?" from a safe distance. I paused before I responded, a little unsure of what to say, before I heard "Sure" come out above my mask.

She took off her mask and sunglasses to look me in the eyes. "I just wanted to say that I'm sorry about all that's going on. I'm also sorry about my ancestors," she said. "And one more thing: I love you." As she caught her breath, all seemed so quiet all of a sudden. "Thank you very much. I appreciate it. That's very kind of you." I replied, turning to walk home.

I've never experienced anything like this, such a direct display of empathy. As I kept walking, I thought of the days after the events of August 2017 as I passed the site where Heather Heyer was murdered and more than 30 others were injured. Those days, some white people would look me directly in the eyes and say hello with intensity—but it felt like sympathy. What's emerging at this moment is empathy—not as a perceived

soft skill, but as a strong, connective, driving force for human interaction. Call it action-based empathy.

Jenna Wortham of *The New York Times* notes that, for three months, Americans have been living in a state of “hypervigilance and anxiety, coping with feelings of uncertainty, fear, and vulnerability—things many Black Americans experience regularly.” During this time, our empathy grew for essential workers, and the impacts on communities of color became front and center.

My interaction with a woman on a warm June day was the product of this confluence—moving beyond thoughts and prayers to action-based empathy to support the humanity of Black people. Such empathy has fueled demand to remove racist symbols from our public spaces. These symbols are familiar to us here in Virginia, where Confederate monuments loom over 220 public spaces. We’ve been watching intently as Confederate statues come down in Birmingham, Mobile, Louisville, and Alexandria—with Jefferson Davis toppled days ago by protesters in Richmond.

In Charlottesville, the current conversation about statues and monuments began in 2016 when student and community activist Zyhana Bryant petitioned the city council to remove the Lee statue and rename its park. Bryant’s petition charged the work of the City’s Blue Ribbon Commission on Race, Memorials, and Public Spaces, which led the city council to vote to remove both Robert E. Lee in Lee Park and Stonewall Jackson Statue in Court Square—resulting in the 2017 white supremacist Unite the Right rally and accompanying violence.

This movement’s action-based empathy led to Gov. Ralph Northam’s June 4th decision to remove the Lee statue in Richmond, and earlier, to sign legislation allowing localities to remove, relocate or contextualize Confederate statues and monuments within their communities starting July 1st.

As this date approaches, the time is now to think of how action-based empathy can create the inclusive and democratic designs we want to see in our public spaces. How do we take this new empathy I experienced from a fellow citizen into public spaces—keeping this moment alive? Action-based empathy must successfully integrate identity, culture, history, memory, and place. I propose three themes for action-based empathic

design—using Charlottesville’s Court Square (home to the now-infamous Stonewall Jackson statue) as an example:

1. Increase connection to and empathy for the natural landscape.

To set the context of our human settlement, orient visitors to Court Square to appreciate our natural world. Designs need to create empathy for the flora, fauna and natural resources that have enabled our existence in this place—allowing for our human occupation. During the pandemic, our connection to the earth and the natural world dramatically increased. Walks and observations of the natural world became a cure for too much screen time and worries of the invisibility of the virus. Imagine if Court Square became a place that reminds us all of our position on this earth—soil below, nature around, the sky above—that we are all connected to for our survival.

2. Strengthen empathy through designs that include an inclusive account of human settlement, specific to this place.

Court Square needs to tell the full story of human settlement at this place for action-based empathy to grow. Start with the First Peoples who inhabited this region for 10,000 years, and the Monacan village of Monasukapanough on the Rivanna River. This forces a rethinking of the English colonists’ version of history, which begins in Jamestown in 1607. Recognize the narrative of Thomas Jefferson and the Monticello plantation in the distance, and the educational plantation of the University of Virginia—both made possible by the enslavement of African labor.

Create designs that combine theme one and two—with historical mapping that shows the vast number of plantations now hidden by single-family homes. Show how Charlottesville provided the Confederate war effort with swords, uniforms, and artificial limbs during the Civil War, and cared for the Confederacy’s sick and wounded in a 500-bed military hospital that employed hundreds of the town’s residents.

Then, ensure the African American narrative is entirely told here. Show how Emancipation in 1865 brought the development of African American communities—including one here called McKee Row, which was actively removed by the rigid anti-Black laws of the Jim Crow period (1877 – 1965). After the statue of Stonewall Jackson is removed, tell how Paul Goodloe McIntire funded it and placed it right where McKee Row once stood.

As visitors look upon the Court House, a design element could raise their awareness of Massive Resistance, adopted in 1956 by Virginia's state government to block the desegregation of public schools mandated by the U.S. Supreme Court in 1954. This element would also note the location of the Jefferson School, built to serve the city's Black students during this period. And the design could mark Vinegar Hill, a thriving Black neighborhood that suffered the fate of "urban renewal" in the 1960s, displacing the City's Black population to the public housing we see today.

3. Continue the energy of the moment to create design competitions—visualizing action-based empathy.

Action-based empathy thrives in design competitions, such as General Devotion/General Demotion, which asked participants to reimagine the Confederate statue-strewn Monument Avenue in Richmond. Resulting designs were empathic models, with thoughtful programming that responded to a difficult and complicated historical context, proposing temporary and permanent interventions.

A design competition for Court Square should take points 1 and 2 as a starting place. Ideas produced under these guidelines would produce the inclusive design features we are looking for.

The time is now to keep the newfound understanding of empathy into our post-statue public spaces—where interactions such as mine become commonplace, the products of this moment of change.

In Georgia, Saving Homes for a Sustainable Future

LAURIE MAZUR

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Julia Jones lived in her modest brick home in Athens, Georgia, for decades, making her mortgage payments and building up a nest egg of equity. But earlier this year, a \$900 water bill helped drive her out. Unable to keep up with such sky-high bills, Jones abandoned her house and went to live with her daughter.

The problem, as it turned out, was a leaky pipe between the house and the water meter. The leak was discovered and fixed thanks to a partnership between a local nonprofit, Athens Land Trust, and the Athens-Clarke County government. Today, Jones is back in her home—and the story of how that happened offers important lessons for those who care about a sustainable future.

In 2018, Athens Land Trust and Athens-Clarke County received a grant from the Southeast Sustainability Directors Network to bring resource conservation to West Broad, a low-income, historically African American neighborhood near the University of Georgia. The original plan was to help residents install low-flow showerheads and toilets, “smart” thermostats, insulation and more.

But when the people of West Broad were asked what they needed, low-flow showerheads were not on the list. They had more basic problems to contend with, like the ruinous water bills that put Jones out of her house. Older residents struggled to maintain and keep their homes—and to hold off the developers in this fast-gentrifying neighborhood.

“We came in with a conservation goal,” says Andrew Saunders, director of the Central Services Department for Athens-Clarke County, who worked with Athens Land Trust on the conservation effort. “But we found

people were living with major health and safety issues. You have to have a floor before you can talk about insulation.”

It’s a lesson that resonated for the folks at Athens Land Trust. The trust works both to preserve nature and to ensure affordable housing—goals that are sometimes at odds. “When you limit development, it can impact the affordability of the rest of the land,” says Heather Benham, the trust’s executive director. “So it’s important to go into it from the front end planning for both.”

In addition to preserving rural land with conservation easements, the trust purchases and rehabilitates urban properties to keep them affordable in perpetuity. Diversity and inclusion are part of the group’s model: One-third of the trust’s board members are low-income members of the community. And the trust works closely with residents to identify and implement programs that meet local needs. For example, after learning that residents needed home repairs and job opportunities, the trust launched a Young Urban Builders program that fixes up homes while training youth in construction skills.

The Young Urban Builders program is enabling elderly residents to stay in their homes. That includes Willie Thomas, who has lived in the West Broad area since 1957. Thomas’ roof was in danger of collapsing, and he feared the house would be condemned. Retired and living on a fixed income, he lacked the funds for a new roof. “My back was against the wall,” he says.

Then he heard about the trust, and applied for help. “They did an excellent job for me,” Thomas says. Working with a skilled foreman, the young trainees replaced the roof, fixed unsafe steps and replaced a broken water heater. “There is no way I could have stayed here without their help,” he says.

Same for Shirley Tillman, another longtime West Broad resident. Health and mobility problems nearly drove her from her older house, but a few changes—including a walk-in shower with a seat—enabled her to stay. “I would have been in a nursing home,” Tillman says.

To better engage local residents, the trust hired Tawana Mattox, an Athens native. “I grew up in a not-so-fancy part of the community, so

I know the people,” Mattox says. That connection was vital to building trust in a place with a long history of marginalization: “I was able to open doors, and bring people to the table,” she adds. “Now they come to community meetings and ask questions and feel good being at the table.”

When Jones suspected a leak was causing her water bills to soar, Mattox was the person she called. Mattox then contacted Saunders at Athens-Clarke County, who created a meter system that monitors water use in real time. He found that Jones’ house was drawing 840 gallons a day—a clear sign of a water leak. And she was not alone: Due to leaky pipes, many homes in West Broad were using five or 10 times more water than average.

Athens Land Trust hired a plumber to fix Jones’ water line, and her usage is now down to 50 gallons a day. Mattox also helped Jones secure a refund from the utility. And the trust is using pooled public and philanthropic funds to repair other leaks in the West Broad neighborhood. Together, the trust and the county government are saving water, saving ratepayers money and reducing shutoffs.

The water savings are substantial. “On Jones’ home alone, we saved as much water as we hoped to save through the entire grant-funded program,” Benham says.

Most importantly, the program helps keep the community intact. “Sustainability and resilience is all about keeping the threads of community tight and strong, and that means keeping neighbors in their homes,” says Meg Jamison, director of the Southeast Sustainability Directors Network.

“When residents are priced out, or are forced to leave by cost burdens, it removes those key threads,” Jamison adds. “The Athens Land Trust is helping to stabilize West Broad, so residents can stay put, maintain their leadership in their community and plan for long-term stability.”

In other words, “sustainability” is not just about conserving resources for future generations. It is about sustaining people, by ensuring living conditions that are healthy and safe. And it is about sustaining communities—the networks of care and concern that will help us face an uncertain future.

Jan Gehl on 60 Years of Designing Cities for People

LAURIE MAZUR

Originally published July 15, 2020 in Planetizen

Jan Gehl is a founding partner of Gehl Architects—Urban Quality Consultants. He is the author of *Life Between Buildings* (1971) and *Cities for People* (2010), among other books. He is widely credited with creating and renewing urban public spaces in cities around the world, including Copenhagen, Melbourne, New York City, London, and many others. Here, Gehl talks with staff of his publisher, Island Press, about what has changed (or not) in his 60-year career as an architect, and why Amazon is scarier than the coronavirus.

IP: Next year marks 50 years since the publication of *Life Between Buildings*; this year is the 10th anniversary of *Cities for People*. What is the major difference between the two books?

JG: The difference is 40 years. The first one was a call to attention, saying something is wrong; the second was my attempt to sum up what we have learned in these 40 years of research and projects around the world. It is a great joy for me to see that in just ten years, this book has been distributed all over the world, and printed in 35 different languages. We have Bengali, we have Hebrew, we have Turkish, and we have hopefully also Slovenian. And very shortly, I expect to see something happening in the Philippines.

IP: It was a radical assertion in 1971 that cities should be designed for people rather than cars. That vision has since reshaped cities all over the world. But right now, we're in the midst of a pandemic and people are kind of scary. How can humanistic planning respond to this moment?

JG: My take on this is that our cities have seen many catastrophes. We've had earthquakes, inundations and tsunamis, wars and invasions. We've had the plague, cholera, the Spanish flu, tuberculosis, AIDS and Ebola.

After each crisis, we bounce back to being human beings again, because there's something built into us that makes us love to give hugs and be close and have shared moments; to enjoy parties and festivals and ordinary day-to-day life talking with the neighbors.

Looking back to history, I found that when it is about bacteria and viruses, the architects don't have good answers. One example is what I call the anti-tuberculosis buildings. In response to the spread of TB, the modernists declared that we couldn't live together in cities. We have to spread out in individual houses, surrounded with grass. And they continued 40 years after tuberculosis was defeated by antibiotics and vaccines.

But all these people who lived in separate buildings with unusable public spaces between the buildings, they started to be lonely and alienated. So we saw a new set of illnesses that were not related to bacteria and viruses but to the conditions of life and work.

Architects and planners should concentrate where we really have an influence. We can make nice cities for people, places where people are not so lonely, and where isolation and depression are not so widespread.

I think that homo sapiens has not changed much since I started studying him/her. That's why when I was asked about the previous book, *Life Between Buildings*, will I change something there, I could just say that it's about homo sapiens in the built environment, and as far as I can see, it's the same species as we had 50 years ago.

IP: So homo sapiens hasn't changed, but has your vision changed or evolved in the 40 years between your two books?

JG: It hasn't changed very much at all. What has changed is the world's treatment of this vision. When I started, many of my colleague architects said, "Oh, my dear, you're wasting your time. You're ruining your career. That is not a thing to do."

But it caught on. The wind has changed from a headwind to a tailwind. It started to change about 20 years ago. And that changed my position, from being a guy who was in revolt against what my colleagues were doing, to being a guy the colleagues are looking up to and asking for advice. It's a fantastic thing for an old guy like me to see my life project be widely used.

IP: When we published *Cities for People*, we urged you to put the content of the book in context of climate change. And at that time, you felt that was outside of your area, your comfort zone. Has your thinking about climate change changed since then?

JG: Two subjects have come more to the fore in the years since this book was written and published. One is climate change; the other is the "sitting syndrome"—people have to move more and drive less in cars and be more active during their life, so they can have a longer life and a better life.

The fact is, building cities for people addresses both. If you do that, you're well on your way to a CO₂-friendly city, where people can walk and bike and avoid the sitting syndrome. So actually, this kind of humanistic thinking is very green and healthy also.

IP: Were there any big surprises—good or not so great—over the years since your early work?

JG: Yeah, one thing that has popped up as a major issue is terror. We can see cities all over the world putting up terror protections with boulders and concrete and barriers.

Another thing, which is really worrying me a lot, is the change from people buying their stuff in stores to buying on the Inter-

net. So instead of people walking up and down the streets, we now have cars going up and down with deliveries of parcels.

And we see lots of changes in the character and the number of the shops. The shops as we know them, in the western world, will be fewer and farther between. What will prevail is bars, coffee shops, and restaurants. Also nail and hair salons and massage—things you can't buy on the Internet. Problem is, these businesses don't have the money the shops had to pay for holiday decorations and upkeep of the city. And they will not be able to take over all the shops that are left open or empty.

IP: So you're more worried about Amazon than about the pandemic.

JG: Absolutely.

IP: What are some of the obstacles to making *Cities for People* more pervasive around the world?

JG: The major challenge for city planning in the coming 20-30 years will be the cities in Africa, Southeast Asia, and South and Central America, where some 90% of all the growth of human population will happen.

The principles of humanistic city planning, where mobility is secured through bicycling and walking and public transportation, will be a good thing for these rapidly growing economies. And all this talk about smart city and autonomous vehicles, that's fine. But that's not for Southeast Asia and for Africa in the foreseeable future. These are gimmicks for economies which are very strong.

IP: You've implemented changes in so many different cities through your work. Is there one thing that convinced city leaders to create more human-scale cities?

JG: The major driver is that people have become sick and tired of the old model. They are tired of modernistic, singly placed buildings and public places completely dedicated to the au-

tomobile. They are tired of the noise and pollution and CO2 production. Now we've had 50, 60 years of that getting increasingly worse, and they are ready for new ideas on city planning.

That's why in Moscow and Sydney and Melbourne and New York, these ideas have been met very favorably. I can see from my shelf here that they liked them, because I have all these plaques and medals and stuff, thanking me for the revival of the city. That's nice for an old guy, to look at that.

This interview has been edited for clarity and length.

How Cities Can Fight Inequality and Climate Change at Once

TIFFANY GANTHIER

Originally published August 25, 2020 in U.S. News & World Report

The year 2020 has been one of reckoning with the inequities that shape American life. The killing of George Floyd, among others, has brought national attention to how people of color are targeted by law enforcement. And the disproportionate death toll from COVID-19 among Black and Latinx people has revealed longstanding inequities in health and access to care.

It is no surprise, then, that our greatest existential challenge—climate change—also reflects racial disparities and the widening gulf between rich and poor. Climate change does not affect all people equally: low-income communities and people of color are hit first and worst by climate impacts, such as extreme heat and flooding. Struggling communities also receive fewer resources for recovery, so disasters push many into a downward spiral of poverty and vulnerability.

But while climate change illuminates our nation's racial and class divides, the steps we take to address it also offer opportunities to build a fairer future.

As cities prepare for the impacts of warming that are now inevitable, many are already addressing inequity head-on. My colleagues and I at the Georgetown Climate Center collected more than 100 case studies of equitable climate adaptation as part of our recently released Equitable Adaptation Toolkit for state and local governments and community leaders.

While local strategies vary widely, some universal rules apply. Truly resilient communities have what they need to withstand impacts and recover quickly after a flood or storm, as well as prepare for the next one.

We found that equitable adaptation starts with understanding *inequitable* impacts. That’s why, in Richmond, Virginia, young “citizen scientists” with the nonprofit group Groundwork RVA fanned out across the city, measuring heat levels in a wide range of neighborhoods. They discovered dramatically higher temperatures in low-income Black neighborhoods with more pavement and less green space. Their findings are now guiding an update of the city’s master plan.

With an understanding of who’s at risk and why, governments and nonprofits can focus their efforts on the most vulnerable. In Miami, Florida, more than half of residents are one disaster away from falling into financial crisis. Catalyst Miami, a community group, created a disaster matched savings account to bolster families’ financial resilience. The program offers a 1-to-1 match to encourage savings, and helps households build assets through coaching and lending circles.

Equity considerations can also be built directly into climate adaptation efforts. In Prince George’s County, Maryland, climate change has brought increased flooding and water-quality problems. At the same time, this majority-Black county struggled to rebound from the Great Recession. In response, the county launched a public-private partnership with twin goals: to reduce storm-related flooding by constructing green infrastructure, and to give a leg up to small and minority-owned businesses by hiring them to carry out the work. The partnership has so far met or exceeded all of its environmental and equity objectives, on time and under budget.

Integrating equity is a twofold process. *Procedural* equity ensures those who are most impacted have a seat at the table to help shape decisions. *Substantive* equity means outcomes that fairly distribute the benefits of new programs and investments, while seeking to remedy historic discrimination and underinvestment.

Philadelphia’s community Heat Relief Plan is a great example of both. The plan started with vigorous community engagement in a low-income, mostly Latinx neighborhood—“Beat the Heat” parties and an environmental wellness fair, followed by a resident survey and interviews. The resulting plan identifies literal hot spots and targets efforts to keep residents in those communities cool and healthy.

In Philadelphia and other cities here and around the world, climate change is now a fact of daily life. While there is much we can still do to limit its scale and impact, our previous carbon emissions guarantee a warmer, more disaster-prone world for years to come. Inequity, on the other hand, is a choice—a condition that flows from countless policy decisions. As we brace for climate change, we can choose to share risks and rewards more fairly, and protect those who are most vulnerable in an uncertain future. When we choose that path, we will be taking an important step toward a world that is safer, and more just, for all people.

Low-Income Households Pay More for Energy, but Efficiency Can Help

ARIEL DREHOBL

Originally published September 30, 2020 in U.S. News & World Report

Pay the electric bill or the mortgage? Run the air conditioner or refill that prescription? Turn up the heat—or eat?

For too many Americans, these are critical dilemmas. Our research shows that even before the coronavirus pandemic, 1 in 4 households struggled with high energy burdens, spending more than 6% of their income on electricity and heat. For more than 1 in 10, that burden was severe, with energy costs consuming more than a tenth of their household budget.

These costs fall heaviest on those with lower incomes, older adults and communities of color. Fully two-thirds of low-income households experience a high energy burden. And compared with non-Hispanic white households, Black households spend 43% more of their income on energy costs, Hispanic households spend 20% more and Native American households spend 45% more.

Part of the problem is that many low-income families live in underinsulated housing with older appliances and heating and cooling equipment that waste a lot of energy. This is due in part to a history of racist policies—such as segregation, redlining and employment discrimination—that have limited wealth accumulation in Black and other communities of color and confined many people to substandard housing. In addition, both low-income families and people of color often face barriers to obtaining the upfront capital or credit needed to invest in energy-efficiency improvements.

The pandemic and recession have made these problems worse. Now, communities that were struggling to pay bills before the global pandemic have been hit hardest by job losses.

Many states have lifted or are poised to lift moratoriums that prevent utility shutoffs, all while record-breaking heat has gripped parts of the nation and colder seasons approach. Countless households are at risk of having their electricity and gas shut off during this public health crisis.

The good news is that there is much that can be done—at the local, state and federal levels—to ease energy burdens.

Simply improving home energy efficiency can make a huge difference. For example, weatherization—through steps such as caulking leaky windows or insulating attics—can cut household energy use by about 25%, in turn reducing the greenhouse gas emissions that cause climate change. These upgrades also provide long-term energy affordability for families who no longer need to use as much energy to live in a safe and comfortable home.

Energy-efficiency programs can also help support the local workforce. For example, The Energy Conservation Corps in North Charleston, South Carolina, provides free efficiency upgrades to low-income families while training disadvantaged and at-risk young adults to become certified weatherization professionals. The program saves homeowners significantly on utility bills, while providing a path out of poverty for its trainees.

Policymakers and utilities also can boost funding for energy efficiency for low-income households, while tracking outcomes to make sure these investments reach those most in need.

At the federal level, lawmakers can increase funding for programs that help families pay energy bills and weatherize their homes. These programs are woefully underfunded: While some 36 million U.S. households are currently eligible for weatherization, the federal Weatherization Assistance Program has served only around 7 million households over the past 40 years.

Families living paycheck to paycheck can't spare the cash to weatherize their homes or buy new, efficient appliances, but there are other ways to finance energy efficiency. For example, utilities can offer "on-bill" financing, in which upgrades are paid for with savings on energy costs from those upgrades. Meanwhile, states can follow the example of New York, where officials have recognized the health benefits of energy-efficient homes

and launched a \$10 million pilot program in part to provide residential weatherization upgrades for Medicaid members.

Energy efficiency has always been a win-win proposition: It saves money and conserves resources. At this moment, efficiency can help ease the burdens of millions of struggling families—but only if we ensure access for those who need it most. Because no one should have to choose whether to eat or have heat.

A Tale of Two (Kinds of) Cities

LAURIE MAZUR

Originally published October 20, 2020 in American City & County

The year 2020 has revealed us as a nation divided—by race, politics and economic well-being. Here’s one more widening divide: clean energy.

A new report by the American Council for an Energy-Efficient Economy (ACEEE) finds that several dozen U.S. cities are striding toward a clean-energy future—mandating energy efficiency, investing in renewable power, meeting ambitious greenhouse gas reduction targets. Yet many more are lagging behind—either falling short of clean-energy goals or failing even to set them.

The cities making progress in this area will reap significant benefits: cleaner air, healthier citizens, jobs in a fast-growing sector, and lower energy costs. Those that fall behind will miss out, widening the gap that separates them from their cleaner, more prosperous counterparts.

ACEEE’s annual City Clean Energy Scorecard ranks 100 cities—home to nearly a fifth of the nation’s people—on their efforts to improve efficiency and scale up renewable energy. This year, New York City vaulted to first place, thanks to tough new standards that require inefficient buildings to make upgrades.

Boston and Seattle tied for second place, with Minneapolis and San Francisco close behind. Washington, DC; Denver; Los Angeles; San José; and Oakland rounded out the top 10 highest-ranked cities. St. Paul, Minn., took the “most-improved” title. And, at the other end of the spectrum, Augusta, Ga., scored dead last; with cities including Wichita, Oklahoma City and Baton Rouge bringing up the rear.

Clean energy and climate

Our national divide on clean energy has important implications for the climate. Scientists warn that we must cut greenhouse gas emissions

dramatically in the next decade to stave off the worst climate impacts—more catastrophic heat waves, storms and fires. The ACEEE report found that 20 cities are on track to meet their greenhouse gas reduction goals, nearly twice as many as last year. But the remaining 80 cities surveyed are either not on track, haven't provided adequate data, or haven't even set an emissions-reduction goal.

“Many cities are really seizing the moment and embracing policies that help them fight climate change, while too many others are, frankly, doing very little,” said David Ribeiro, director of ACEEE's local policy program and the lead report author.

Top-scoring cities lead by example—greening government operations by buying efficient fleet vehicles, upgrading outdoor lighting to LEDs, and constructing or retrofitting buildings to reduce their greenhouse gas emissions. A national leader in this area, Austin, has powered all of its municipal buildings with 100 percent renewable energy since 2011. The city is also working toward a carbon-neutral vehicle fleet.

Other cities are focusing on energy use in buildings, which can account for 50-75 percent of overall energy consumption. As noted above, New York won the highest marks in this category, followed by Seattle and Boston. But blue-state coastal cities aren't the only leaders in this area: in June, St. Louis established a Building Energy Performance Standard that will help it meet its goal of zero emissions by 2050. This builds on St. Louis' previous successes, including programs that help commercial and residential property owners afford the upfront costs of energy-saving upgrades.

Closing the divide within cities

While the ACEEE report showed a wide divide between cities, there are gaps *within* cities as well. Low-income communities and communities of color often face barriers to programs that could save them money by helping them make their homes more energy-efficient. That is a significant problem, since those communities already struggle with heavy energy cost burdens. Compared to non-Hispanic white households, Black households spend 43 percent more of their income on energy costs, Hispanic households spend 20 percent more, and Native American households spend 45 percent more.

Moreover, low-income communities and people of color endure greater air pollution from the burning of fossil fuels, and are generally hit first and worst by climate impacts such as flooding and heat waves. These communities have the most to lose from the status quo—and the most to gain from a clean-energy future.

That's why a few cities are working hard to engage marginalized communities in clean-energy planning and target investments where they are needed most. For example, Minneapolis created a series of community-led Green Zones in low-income neighborhoods; community members sit on task forces that help guide the implementation of climate action work plans. Minneapolis also provides clean, efficient transportation for low-income communities, while a financing program and tax credits encourage the development of affordable housing near transit hubs.

And Washington, DC, took an equity-driven approach to community engagement for its Sustainable DC plan. The city partnered with community organizations to recruit new participants; held meetings in public transit-accessible venues for community members; and created an Equity Advisory Group composed of residents and leaders of neighborhoods most at risk of climate change impacts. DC also administers programs to help residents afford energy efficiency upgrades, and its Solar Works DC program provides low-income residents with solar installation job training.

Several other cities are striving to become fairer and greener, with 14 taking steps to improve their approaches in some way. Milwaukee launched a City-County Task Force on Climate and Economic Equity; Providence and its Racial and Environmental Justice Committee—composed mostly of community members—released a Climate Justice Plan with climate equity objectives. Emerging efforts to better engage frontline communities are encouraging but certainly not widespread. Nearly all cities have substantial room to ramp up efforts on equity.

Prospects for the future

It's worth noting that research for the ACEEE report was conducted before the transformative events of 2020—the pandemic, recession and protests over systemic racism. The prospects for clean energy are more uncertain now than they were earlier this year, as cities confront shrinking budgets and bandwidth.

But this is precisely the time to embrace clean energy, according to the report's authors. "City budgets are under enormous strain. Clean energy policies are part of the solution because they create jobs while reducing energy costs for households, businesses, and city government," said Ribeiro.

Indeed, in our ever-more divided nation, the clean-energy gap is one we can, and must, close. As cities focus on economic recovery, investments in efficiency and renewable energy can create jobs and boost local economies. What's more, the impact of those investments will transcend divides, lowering energy costs and reducing pollution for all Americans.

9 Reasons to Eliminate Jaywalking Laws Now

ANGIE SCHMITT AND CHARLES T. BROWN

Originally published October 16, 2020 in Bloomberg CityLab

On Sept. 23, Kurt Andreas Reinhold, a 42-year-old Black man, was trying to cross a street in San Clemente, California, when two officers from a special “homeless outreach unit” stopped him. An altercation ensued; minutes later, Reinhold, a father of two and down-on-his-luck former youth soccer coach, was shot and killed. In a cellphone video of the confrontation, Reinhold can be heard demanding, “Where did I jaywalk?”

This is a particularly troubling example of a pattern we see all too often. Black and Brown people, especially men, are routinely targeted by police for jaywalking or simply existing in public space. Often these stops result in an escalating series of fines and fees. In other cases—as in San Clemente, as well as in Sacramento, Seattle and New York City—they can end in violence.

Especially at a time when there is intense focus on police brutality and racism, Reinhold’s death should prompt us to pause and consider who is truly served by jaywalking laws. Their effectiveness as safety measures appears to be limited: Despite heavy handed and selective jaywalking enforcement, pedestrian deaths in the U.S. have increased rapidly in the last decade. As two of the top experts on pedestrian safety in the country, we think it is time for cities to consider decriminalizing jaywalking or eliminating the infraction altogether.

Here’s why.

1. Jaywalking is a made-up thing by auto companies to deflect blame when drivers hit pedestrians.

Although jaywalking is foundational to the way we think about streets and access today, it is a relatively young concept. As University of Virginia

historian Peter Norton explains in his book *Fighting Traffic: The Dawn of the Motor Age in the American City*, the notion of “jaywalking”—“jay” being an early 20th century term for someone stupid or unsophisticated—was introduced by a group of auto industry-aligned groups in the 1930s. Prior to the emergence of cars in cities, no such concept existed; pedestrians had free rein in public right-of-ways. But as city streets became sites of increasing carnage in the early days of America’s auto era—about 200,000 Americans (many of them children) were killed by cars in the 1920s—automakers sought regulations that would shift blame away from drivers.

2. The concept of jaywalking encourages drivers to be aggressive toward pedestrians, and for third parties to ignore or excuse pedestrian deaths.

Just as their early proponents hoped, jaywalking laws succeeded in creating a perverse “moral basis” for pedestrian deaths in the minds of the public. We see this reflected today in media reports of pedestrian deaths where the convention is to note the victim “wasn’t in the crosswalk.” This moral framing is so powerful pedestrians who are killed are often slandered as “lazy” or “stupid” by officials charged with keeping them safe.

But this conception is cruel and prevents us from addressing the core of the problem. People don’t deserve to die for the minor offense of jaywalking.

3. Our streets are not designed to make walking safe or convenient.

The core problem lies with street design, not human behavior. Tellingly, pedestrian deaths in cities around the country are concentrated on certain types of roads: wide, fast arterials. For example, in Rockford, Illinois, almost one in four traffic deaths is on a single road: State Street. A similar proportion of pedestrian fatalities Philadelphia take place on Roosevelt Boulevard. These dangerous roads, which lack adequate crossings, lighting and sidewalks, are typically concentrated in Black and Brown neighborhoods.

4. Pedestrians are almost as likely to be struck and killed at an intersection as mid-block.

Support for jaywalking laws rests on the idea that they make us safer. But the data on crossing location and safety is not as compelling as the law suggests.

Federally sponsored research in the 1990s looked closely at the types of situations in which “serious pedestrian crashes” occurred. It found that pedestrians are struck in crosswalks almost as often (25% of the time) as they are struck midblock (26%). In the additional almost 50% of crashes, pedestrians are struck outside of typical pedestrian crossing scenarios—for example, on sidewalks, or walking along the side of the road or highway attending to disabled cars.

5. When pedestrians jaywalk, they are often behaving rationally.

Jaywalking laws are not flexible enough to account for the range of scenarios pedestrians encounter, including prolonged signal timings and delays that give priority to automobiles. In some cases, jaywalking is driven by the fear of crime, particularly in low-income communities. In others, there simply aren’t enough crosswalks, or crosswalks are at the wrong location.

Jaywalking may be the most rational choice given a host of bad options. For example, an investigation into the nation-leading pedestrian deaths in Arizona by the *Arizona Republic* last year found only about a third of the pedestrians killed in Phoenix were near (within 500 feet of) a crosswalk. The reporters concluded there was a need for more crosswalks, not a crackdown on jaywalkers.

There is strong scientific support for that kind of approach. A 2014 study conducted by the Federal Highway Administration was able to use environmental factors—like the presence of a right-turn lane or the distance between crosswalks—to predict with 90% accuracy whether or not a pedestrian would cross mid-block.

Criminalizing a rational, predictable response to poor infrastructure is unjust.

6. Jaywalking laws are not enforced fairly.

Because police have broad discretion over their response to this petty offense, jaywalking lends itself to biased enforcement.

A 2017 investigation by *ProPublica* and the *Florida Times-Union* found that Black people in Jacksonville, Florida, for example, are three times as likely to be stopped and cited for jaywalking as white people. Those living in the poorest neighborhoods were six times as likely. Black men and boys were the most frequent targets.

The same pattern has been observed just about everywhere it's been analyzed. An investigation by the *Sacramento Bee* found that Black residents received 50% of the city's jaywalking tickets in 2017, despite making up just 15% of the population. Similar patterns have been uncovered in Seattle and New York.

7. Jaywalking stops are frequently explosive.

People stopped for jaywalking are often confused about why they are being stopped. For example, an 84-year-old Asian man was bloodied by police in New York City in 2014. The man, Kang Wong, did not speak English and witnesses told the *New York Post* he “didn't appear to understand their orders to stop.” In Seattle, in 2010, a white police officer was caught on tape punching a Black 17-year-old girl when she protested a jaywalking stop.

Often police interpret confusion as lack of cooperation and add on charges—like resisting arrest—or resort to use of force when people complain about being stopped on such a minor offense. But pedestrians who feel unfairly targeted have a point: These laws are enforced arbitrarily, with racially discriminatory effects to questionable safety benefit.

8. The focus on jaywalking reflects the lower political status of those who walk—not the societal harm of the activity.

Pedestrians who are hurt and killed in the U.S. are disproportionately marginalized: Black, Brown, elderly, disabled, poor. Perhaps this is the reason we seize on the jaywalking as the root cause of the problem, rather than offenses by drivers or road designs that create unsafe environments.

9. The safest countries globally allow jaywalking.

The U.K. has about half as many pedestrian deaths per capita as the U.S. (and a much higher walking rate). But the U.K. allows pedestrians legally to cross where they please. Meanwhile, in Norway, the world leader in eliminating traffic deaths, pedestrians are encouraged to cross at certain locations, but there is no rule against jaywalking, and it is certainly not a crime that police go around assaulting people for violating. If the U.S. could match Norway's traffic safety record, about 30,000 lives a year would be saved, according to the 2018 global status report on road safety by the World Health Organization.

Eliminating jaywalking laws may sound radical, but it's been discussed before in cities such as Seattle. Other places, like Berkeley, California, are

experimenting with new models for traffic enforcement that deemphasize police in favor of crash investigators who are trained to help promote infrastructure changes that improve safety. New York Attorney General Letitia James has advocated for removing police from traffic stops, and a new survey shows a majority of New Yorkers support the idea.

Wider reforms and changes to traffic safety enforcement are needed, from increasing diversity within law enforcement to enhanced data tracking, police training, inclusivity and investment in new social and criminal justice programs. Such efforts must be implemented with a vigilant eye towards reversing existing inequities: Early results from so-called “unbiased” enforcement efforts, such as intelligence-led enforcement, used by cities like Oakland, California, show disparities in traffic stops remain. The time is now, not later, to revisit or eliminate laws like jaywalking that are primarily used as a pretext to stop Black and Brown people—and rarely protected any pedestrians in the first place.

These Three ‘Net Zero’ Buildings Are Leading the Way on Climate Change

WILL SCHICK

Originally published May 11, 2020 in Greater Greater Washington

Much of our greenhouse gas, especially in cities, comes from buildings. To fight climate change, cities are pushing for buildings that don't pollute. In the Washington region, a few are showing the path forward in urban and suburban areas.

In the District, for instance, buildings account for approximately 3/4 of all greenhouse gas emissions. Those emissions are produced by heating, cooling, and lighting buildings, as well as their construction. This number is far higher than globally (39%) or in the United States (40%), since cities have more buildings and less industry, mining, power plants, and so forth.

The District has imposed new rules for large buildings to reduce greenhouse gas emissions as much as possible.

The ultimate goal is a “net zero” building, which produces as much energy as it uses, on average. There are a few in our region, including the American Geophysical Union in DC, Discovery School in Arlington, and the Unisphere in Silver Spring.

The American Geophysical Union (AGU) recently renovated their building on Florida Avenue NW into a net zero building. AGU is a community of around 120,000 earth and space scientists from all over the world who study everything from oceans to natural hazards to the weather and the intricacies of black holes.

Janice Lachance, the Executive Vice President of Strategic Leadership and Global Outreach for AGU said that there was a “direct link” between her organization's mission and “the decision to make this a net zero building.”

“Net zero” is different in cities and suburbs

There are some challenges that come with being a structure in an urban environment. During construction of their current site, Lachance and her team decided to visit several different net zero energy buildings in suburban Virginia. That’s when they discovered that achieving net zero in an urban environment could be more challenging than in suburbia because of the lack of space.

She remembers asking one administrator of a suburban net zero building about how they would react to an unanticipated spike in energy use. Lachance laughed when she received the answer: “Oh, I just buy a couple more solar panels and throw them up on the roof.”

For Lachance, it was a lesson in efficiency. In cities, “there’s only so much space that you have for the things that generate energy,” she said.

That’s not the only challenge: the AGU building faced considerable hurdles getting historic preservation approval for its renovation as well, particularly for the solar panels.

This spring and summer AGU will install 719 solar panels on their roof, making use of every possible square inch (some of those panels will be positioned vertically on their southern wall). By contrast, the Discovery School in Arlington, which is Virginia’s first net zero energy building, has 1706 solar panels installed on their roof. The Discovery School spans 97,588 square feet while the AGU building has slightly less space at 62,000 square feet.

But the key to achieving net zero for both structures has as much to do with reducing energy use as it does on solar energy.

Within the AGU building, you’ll find that lights are set to motion monitors, that computer monitors are on low power and that people take the stairs when they can. The Discovery School uses 100% LED lighting, which helps to reduce overall energy consumption.

Other innovative ways large buildings can reduce energy

Like the AGU building and the Discovery School, the “Unisphere” project in Silver Spring, Maryland couples solar with innovative design methods to make the building as energy efficient as possible.

Both AGU and the Unisphere project feature “electrochromic” windows. These are coated with various tints that react to the changing position of the sun, keeping down the demand for heat in winter by allowing more sun in, and for cooling in summer by blocking it out.

Commercial and residential buildings of the future could feature such windows as a way to reduce overall energy consumption.

Windows are also a key feature of the Discovery School, where one third of their wall space is windows, which increases natural light and also helps energy efficiency.

Each one of these buildings also rely on other energy-saving strategies involving everything from the use of geothermal heating to sophisticated ventilation systems.

The AGU building for instance, uses a direct current (DC) system within their building instead of alternating current, which requires conversion to DC power and wastes potential energy every time something is plugged in like a laptop or phone.

In the basement of the AGU building, there’s a heat exchanger that repurposes sewage into a source for heating and cooling, by redirecting thermal energy that comes from separating solids from liquids.

Then there’s the HVAC system, which uses cooling panels and water pipes throughout the building. A filtration system makes use of plants that grow up walls to help with air quality.

How do the calculations for “net zero” work?

So, here’s where things get a bit complicated. According to Christine Gibney, AGU’s net zero operations specialist, there are “about forty different definitions” of the term “net zero energy.” This, she said, has to do with how energy production and use is accounted for—for instance, it can come from either on-site sources, or from off-site sources. Then, there are competing industry standards that each have a slightly different definition of the term.

The AGU building generates all the energy it uses. Building managers work with the standards set by the New Buildings Institute to ensure

that the total energy they've consumed on a 12-month basis equals the amount they generate. The purpose behind doing this is to show that creating such a structure is possible, even given the limitations of being in an urban environment.

Eventually, as cities inch toward their goals of becoming carbon neutral and environmentally friendly, residential buildings and homes will likely need to follow suit and develop ways to reduce their energy consumption and also contribute to the grid.

The lessons offered by the experience of the large scale buildings such as AGU, the Discovery School, and Unisphere show the importance of adopting solar and give us some ideas as to what homeowners and other businesses should think about when planning for their future: more energy efficient windows, upgraded HVAC systems, LED lighting, and solar—which the District has recently made available for free to low-income homeowners.

“Net-zero” for large-scale buildings also comes at a hefty cost: according to Liza Lester, AGU’s manager of public information, they received some financial assistance from the District in the form of \$37.4 million in tax-free bonds. However, many smaller homes and businesses can make relatively small changes to get themselves closer, at least, to net zero.

Why ‘Middle Neighborhoods’ Are the Sweet Spot Between the City and the Suburbs

DANIEL PAROLEK

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The COVID-19 pandemic has reignited a debate about where Americans want to live: in dense, lively urban neighborhoods, or in quiet, sprawling suburbs and small towns. After decades of urban growth, the pandemic has some people questioning the wisdom of living in close proximity with millions of others. But is the alternative a flight to suburbia—with its dependence on climate-changing automobiles and soulless shopping malls?

No. There is a sweet spot between the heart of a city and suburb. “Middle neighborhoods” offer the right balance of urban amenities and elbow room. The problem is that current zoning laws and other standards make it extremely challenging to build these neighborhoods. That needs to change.

Middle neighborhoods exist in every city. Primarily built before the 1940s, they include a mix of small-lot single-family homes, house-scale buildings with multiple units (which I call missing middle housing), high-quality private and public spaces that are not overly crowded, great walk- and bike-ability, and enough population density to support commercial amenities and services like high-quality health care. Typically, they have population densities of 8,000 to 11,000 people per square mile, which my colleague Brent Toderian calls “gentle density” and Lloyd Alter at *Treehugger* calls “goldilocks density.” These middle neighborhoods just may be the sweet spot for much-desired livability.

The Westbrae neighborhood in Berkeley, California, where I live, is an excellent example of a middle neighborhood. It has a mix of small-lot

bungalows and all of the missing middle housing choices—duplexes, multiplexes and other dwellings that occupy the space between single family homes and apartment buildings. Our neighborhood Main Street includes a much-loved bagel shop, grocery store, and other commercial services and amenities. Recently, news that the local bagel shop was struggling spread quickly via social media channels, and the community came out to support the business.

It's easy to get around in Westbrae. Slow-speed, narrow, tree-lined streets make it comfortable for walking and biking; there's also easy access to regional trains and many bus lines that run fairly frequently. Westbrae residents who choose not to own a car—or who cannot afford one—can walk a couple blocks and jump on a bus or take Bay Area Rapid Transit to access health care facilities. You don't get this type of car-free access or proximity to services in a suburban environment.

We don't have the rolling expanses of lawn that are common in suburbia. The yards in my neighborhood are small by American standards: mine is about 10 feet deep and 15 feet wide. But that was just enough space to enable me and my neighbors to get outside while we were sheltering in place, a luxury unavailable to some in denser, high-rise housing.

While some of us are lucky enough to live in older middle neighborhoods, newer ones are hard to find. There are many barriers to building them, starting with off-street parking requirements, misguided zoning/development standards, and street specifications, all of which default to creating auto-oriented suburban places.

City planners and engineers, community members and decision-makers need to get over their perception that a neighborhood cannot function without a lot of off-street parking. In some of the nation's most highly desirable neighborhoods, many examples of multi-unit missing middle housing types exist without designated parking.

Zoning also needs an overhaul. Too often, zoning requires lot sizes that are too big and densities that are too low. Fully 75% of the land in U.S. cities zoned for residential use only allows single family homes or one unit per lot. In addition, the narrow, tree-lined streets we love in Westbrae are illegal to build today in a majority of cities: street standards are driven by the goal to move cars efficiently from one place to another, requiring wide,

high-speed, multi-lane thoroughfares. The resulting streetscapes keep cars moving, but they make walking and biking unpleasant and dangerous.

Westbrae and other middle neighborhoods have proven their livability both before and during the pandemic. Demand for missing middle housing types and medium-density, walkable neighborhoods has grown over the past decade; these neighborhoods are popular with renters and buyers from diverse market segments, including baby boomers and millennials. As a prolonged recession looms, the range of housing prices in these neighborhoods, and the quality of life they deliver, will only broaden their appeal.

This is a call to action for current and future planners, urban designers and city decision-makers to remove barriers and enable more middle neighborhoods to be built. It is time to rethink the illogical institutional barriers that are currently in place and help our cities meet the growing demand for a more sustainable, equitable and livable future.

We Need Rental Registries Now More Than Ever

SHANE PHILLIPS

Originally published December 18, 2020 in Shelterforce

Being a landlord is a unique line of work. In few sectors can someone assume so much responsibility with so little training.

In most cases, a downpayment and a good credit score is all it takes to buy and begin managing a rental property, the place where tenants eat, sleep, play, raise their children, and—increasingly—work. Because the bar to entry is so low, many landlords are unaware of their responsibilities, or they are actively malicious and exploitative; they may increase rents beyond legal limits or make unenforceable eviction threats, for example, and they often get away with it because tenants typically know even less about their rights. Most decisions that landlords make about their tenants' housing situations are never approved, reviewed, or even witnessed by an outside party. It's a system designed for abuse.

As renters face illness and job loss due to the COVID-19 pandemic, a confusing patchwork of state and local eviction protections is the only thing staving off homelessness for hundreds of thousands, perhaps millions, of vulnerable households. Despite the importance of these protections, public officials lack real-time data to know whether landlords are complying with the rules or flouting them—not just for recent eviction protections, but also pre-existing regulations like building code requirements and rent control.

As a result, enforcement is spotty at best. A National Housing Law Project survey found that 91 percent of legal aid and civil rights attorneys reported that they have witnessed illegal evictions in their area. The solution to this problem is a rental registry, a simple online tool to track basic information about rental housing and the treatment of tenants. With minimal cost and hassle, rental registries can add much-needed transparency

to the landlord-tenant relationship, keeping landlords accountable and helping renters stay safe and stable in their homes.

Rental registries already exist in cities across the country, including Raleigh, Seattle, Minneapolis, eight cities in California, and at least 20 in Texas. The costs on the city's end are modest. San Francisco recently estimated a \$300,000 startup cost with annual costs of around \$1.7 million to \$3.6 million per year. Most existing registries were created only to support code enforcement activities, but a simple set of requirements could allow them to do much more.

Unsurprisingly, all rental registries start with registration. Landlords must usually register each unit separately and provide their contact information to the city. Because most registries were created to support inspections, this is often the only information required—but it shouldn't be. At a minimum, landlords should also be required to report the monthly rent due for each unit, when the rent was last increased, whether parking or utilities are included in the rent, and when the tenant first moved into the unit. Cities currently lack this information, making it impossible to accurately measure affordability or track vacancies over time. Requiring information like rent and utility costs also establishes a record of the basic terms of the lease agreement, making it more challenging for landlords to revoke or alter them with impunity. Landlords must also include their contact information so they can be easily reached by the local housing agency for periodic inspections or to respond to complaints.

But rental registries could do much more. In places with existing registries, they should be expanded so that tenants can create their own account linked to their home (likely with some form of address verification) and have access to the information provided by their landlords. In places that haven't yet established a registry, this function should be provided on day one. Allowing tenant registration would provide a check on claims made by the landlord about rent, lease terms, etc., and it would give tenants a direct line to the local housing agency, and the housing agency a direct line to tenants. Ideally, tenants would have access to basic information about the protections they enjoy, tailored to the type of home they reside in (e.g., a single-family home or an apartment, which may offer different protections), and local officials could push out important information to tenants when necessary, as with the rapidly evolving response to coronavirus and the resulting economic and eviction crisis.

Rental registries should also require landlords to provide notice whenever a tenant's rent is increased or an eviction is threatened or filed. This should include a copy of the written notice that was sent to the tenant. This does not mean that rent increases or eviction filings need to be approved, or even reviewed, by the local government; the goal is transparency and accountability, not absolute control. Rental registries are not widely used to facilitate tenant outreach or landlord oversight, but they should be.

Landlords often send their tenants unenforceable notices, including illegal rent hikes or evictions, or inform them only verbally of these changes, hoping that tenants will comply without raising a fuss. They are frequently rewarded for these efforts when tenants vacate without asserting their rights, and even if they're caught the penalties are usually minor. A rental registry would establish a common understanding that all changes to tenancy status must be reported to the registry, allowing both the tenant and the government—via random checks, or when following up on a complaint—to verify that the notice sent to the tenant matches the notice found in the registry. If a tenant received a notice to vacate but couldn't find it in the registry, the notice would be considered null and void and the landlord would be subject to a hefty fine. If the tenant was told by their landlord that their rent was going up 10 percent, but only a 3 percent increase was reported to the government, a complaint could be filed and, again, a sizable fine levied.

For landlords who always follow the rules, the only burden of a rental registry would be a small annual fee (in Los Angeles it costs just \$24.51 per year per unit) and the time associated with reporting unit information and changes to tenancy status. Other cities have instituted fees ranging from \$50 per year per unit in Santa Monica to \$250 a year in Berkeley. Reporting could be made quick and convenient by providing simple online forms for routine activities such as rent increases, where the landlord need only check a box and input the percentage increase and new lease rate. For less scrupulous landlords, the impacts would be severe. They would, in effect, be forced to tell on themselves every time they violated a tenant's rights. That's precisely the point.

Los Angeles is one of the many cities that have approved rental registries in the past several years; and, as expected it faced heavy opposition from landlords. In a February 2016 meeting of the city council's housing

committee, 45 people provided public comment—about half of them opposed the proposal—with many expressing concerns over tenant privacy issues. Yet at this same meeting nearly a dozen tenant organizations showed up in support of the registry. Shortly after the ordinance was approved 14-0 by a city council populated by several landlords, the Apartment Association of Greater Los Angeles sued. The lawsuit failed and the registry is still in effect today. There have been broader efforts to expand the use of registries, with California Assembly member Buffy Wicks advancing legislation for a statewide rental registry each of the past two years, though both bills were defeated by apartment-industry lobbyists. Apartment owners argue that rental registries are a costly imposition and an invasion of privacy for tenants and landlords alike. But privacy concerns can be easily resolved by omitting more sensitive information like tenant names and household size—requiring the former has gotten San Jose into legal trouble over its new registry program—and it's clear from the experience of cities like Los Angeles that tenant advocates are on the side of rental registries, not against them. Landlords, meanwhile, are not a credible representative of tenant interests. The rampant abuse of eviction protections during the COVID-19 pandemic is evidence enough that stronger oversight is needed.

Tenant protections are an indispensable tool for housing stability, but protections are only as good as the enforcement on which they depend. Rental registries can be an effective, efficient means of increasing transparency and improving accountability in the rental housing market. The need for better enforcement has never been clearer, and state and local governments should take the lead by adopting registries of their own.

Why We Must Close Polluting Urban Power Plants

SETH MULLENDORE

Originally published May 27, 2020 in U.S. News & World Report

The COVID-19 crisis lays bare the environmental injustices facing urban communities. Multiple studies have now drawn a clear link between pollution—both fine particulate matter, known as PM2.5, and nitrogen dioxide—and coronavirus mortality rates. Urban communities of color are most burdened by these pollutants, which come from industry, transportation and power plants. It's time for governments to recognize this dangerous health disparity and take action to reduce emissions, starting by shutting down the most polluting power plants.

Peaker power plants, typically powered by gas and oil, are among the worst offenders. These inefficient power plants fire up to meet times of high energy demand, spewing nitrous oxides, sulfur oxides and particulates into surrounding communities. They're predominantly located near population centers where energy demands are greatest and typically located in communities of color and under-resourced areas. There are more than 1,000 peakers in operation across the country today, with the highest concentrations centered in and around major metropolitan areas.

Early data from the few cities and states that are including racial and ethnic information in COVID-19 infection and mortality rates has confirmed that black communities are bearing the brunt of virus impacts. In Michigan, African Americans makeup 14% of the overall population, but account for 31% of COVID-19 cases and 40% of deaths. The Detroit metro area, the epicenter for the virus in the state, is also home to one of the greatest concentrations of aging, inefficient peaker plants in the country, with a one-gigawatt fleet of peaker power plants that is approaching the half-century mark in age.

A similar story can be found in data coming from Chicago, where more than 70% of deaths have been among black residents, though they account for less than 30% of the city's population. The Chicago metropolitan area includes 17 peaker plants, totaling over 8 gigawatts of polluting urban power generation.

Along with Chicago and Detroit, the 10 metro areas most burdened by aging peakers are collectively home to nearly 200 plants—major sources of local nitrogen oxides, sulphur oxides and PM2.5 emissions. The New York City-Long Island-Newark region tops the list with 46 peakers, followed by the Los Angeles metro area with another 29 peaker plants. (Other top offenders include the metro areas of Baltimore-Washington, D.C.; Boston; Dallas; Tampa; Philadelphia; and Hartford-Middletown-New Haven in Connecticut.)

In New York City, communities are now demanding system change. A coalition of environmental justice communities and nonprofit organizations with legal and clean energy expertise has come together to call for an end to all fossil fuel peaker plants in New York City and for their replacement with clean, local renewables and battery storage.

The PEAK Coalition—composed of New York City Environmental Justice Alliance, UPROSE, The Point, New York Lawyers for the Public Interest, and Clean Energy Group—recently released a report that details the full economic and environmental costs of the city's peaker plants. The report, *Dirty Energy, Big Money*, found that some \$4.5 billion in ratepayer money has gone to support New York City's dirty, inefficient fleet of peaker plants over the past decade. Those plants are a significant source of urban emissions, accounting for more than 10% of nitrogen oxide emissions on high-ozone days when air pollution is at its worst.

The report also highlights opportunities for clean alternatives, like offshore wind, rooftop solar, and battery storage systems, to replace the city's existing peaker plants, options that are increasingly being used across the country.

Those alternatives could save lives during the pandemic—and beyond. A study from researchers at the Harvard T.H. Chan School of Public Health found that even a small decrease in exposure to particulate matter emissions could have dramatically reduced COVID-19 related deaths in

New York City. The researchers concluded that reducing PM_{2.5} emission levels by just one unit over the past 20 years would have prevented 248 deaths from COVID-19 in Manhattan through early April. The number of deaths that could have been avoided through the entire course of the virus would be even higher, in addition to the many lives spared due to reductions in other serious health issues linked to power plant emissions, such as chronic respiratory conditions and heart disease.

Along with serving as emission-free alternatives to urban peaker plants, batteries and renewables can be widely distributed throughout cities, strengthening communities through increased energy resilience, lower energy burdens and the potential for local wealth creation. The work to enable this just energy transition, where local generation delivers benefits instead of causing harm, has now begun in New York City. However, much still needs to be done to make a compelling case for peaker replacement to gain broad support among regulators, policy makers and utilities.

In other cities, the harm caused by urban peaker plants is still largely hidden from the public. It is time to shine a light on the economic, environmental and social injustices resulting from today's outdated, inefficient system of fossil fuel power plants for peak electricity demand. There is a better solution, and now, more than ever, it is time to work together to shut down polluting peaker plants for good.

‘Blue Index’ Captures Our Emotional Reactions to Urban Waterscapes

REBECCA WODDER

Originally published May 20, 2020 in Earth Island Journal

Being in the presence of water can lift our spirits, whether a rushing brook or a sparkling lake touched by a summer breeze. Human evolution was shaped by the ceaseless need for freshwater to sustain our thirsty brains, which are more than 70 percent water. So, perhaps it’s not surprising that during these very stressful times, being near water is rejuvenating and relaxing. Urban designers and city managers could benefit from a better understanding of human emotional experiences with water and how to enhance quality of life by providing more and better opportunities to interact with it.

To this end, a practical new tool is being tested in Austin, Texas that holds promise for improving community mental health and happiness. Blue Index is a digital assessment tool that collects immediate, on-site impressions of people’s outdoor experiences with creeks, ponds, and wetlands, as well as built water features such as fountains and pools. It reveals which local waterscapes people most value and why, to guide public investments in protecting, restoring, and making it easier to enjoy these resources. Blue Index is the brainchild of Kevin Jeffery, a newly minted urban landscape designer recognized recently as an “Emerging Leader” by River Network.

An abundant and accessible supply of high quality natural and built waterscapes is important, especially during difficult times such as the current COVID-19 pandemic. Wallace J. Nichols, PhD, author of *Blue Mind: The Surprising Science That Shows How Being Near, In, On, or Under Water Can Make You Happier, Healthier, More Connected, and Better at What You Do*, has been talking to mayors during the pandemic, urging

them to find safe ways to maintain public access to water resources in their communities. Nichols believes that being in the presence of water is the “best medicine” for many people, and essential for people suffering from long-term stressors like addiction or PTSD.

As Nichols’ 2014 book explains, behavioral and social sciences show why spending time outdoors, especially near water, is so beneficial for human happiness, connectedness, and our collective capacity for action. Dr. Nichols was an advisor to the Blue Index project and his *Red Mind/Blue Mind* dichotomy is the foundational premise of Blue Index. Nichols defines *Red Mind* as an “edgy high, characterized by stress, anxiety, fear, and maybe even a little bit of anger and despair.’ This state is a result of the physiological stress response that evolved to help us survive ... [But if activated repeatedly], our stress hormones remain high and keep us in an agitated place.” By contrast, *Blue Mind* is a “mildly meditative state characterized by calm, peacefulness, unity, and a sense of general happiness and satisfaction with life in the moment.”

Besides individual well-being, Nichols reports that time spent in nature also “make[s] us feel more connected to something outside of ourselves... [P]eople who viewed nature scenes ... were more concerned with prosocial goals and more willing to give to others.” These observations align with psychological research showing that natural waterscapes are important triggers for feelings of awe and wonder that predispose people to compassion and empathy for their fellow human beings.



As the saying goes, “you get what you measure.” But how to measure the personal and social benefits of access to waterscapes? That was the question Kevin Jeffery set out to answer when he began to develop Blue Index.

Jeffery’s childhood experiences with scouting and camping ignited his passion for nature. Today, he has grown to become the kind of creative, aspiring entrepreneur that current global environmental challenges cry out for. He believes that “society’s biggest challenge is a lack of empathy for the planet and for each other.” Jeffery envisions new ways of caring for the planet and seeks to broaden the caring circle to engage younger generations living uncomfortably with the environmental consequences of an older generation’s choices.

“To feel better and enjoy a sustainable lifestyle while doing less violence to each other and our natural surroundings,” Jeffery says, “people must see connections between things they value and their everyday actions.”

Jeffery’s first job out of college was working with adjudicated youth in Washington, DC to clean up the Anacostia River—at the time, a highly polluted and largely ignored tributary of the Potomac River. Bald eagles had abandoned the dirty river in the 1950s and the project’s goal was to bring them back by restoring their breeding habitat.

“It was the hardest and most rewarding job I’ve had,” he says. “I learned so much from these people, who were the same age as me, but hadn’t had the same kinds of outdoor opportunities. I watched their initial discomfort with nature evolve to confidence, then curiosity, and then caring.” This pivotal experience brought into high relief the benefits of time spent outdoors near water. “I saw the power of water and wanted to find ways to give people positive experiences with nature, each other, and with the local agencies that provide these opportunities.”

Water management agencies use all sorts of data-driven indices—water quality, biological integrity, flooding risks—but they don’t often measure human responses to interactions with water. As a graduate student at the Austin campus of the University of Texas, Jeffery created the Blue Index to close that gap. Over 18 months, from July 2017 to December 2018, his innovative concept was tested across a diverse array of waterscapes scattered throughout Austin, TX. Nearly 2,000 people participated in the initial pilot test of Blue Index. They snapped photos and answered survey questions to reveal key attributes of these places and their emotional reactions to being in the presence of water bodies across their city.

Austin is rightly proud of its trails, parks, and lakes. More than two million people live in the metro area and many enjoy outdoor recreation. At the same time, as a city of creeks, Austin is climate-challenged by frequent flash floods, increased sediment impacting the city’s water treatment plant, and algal blooms. To engage residents in climate adaptation and mitigation actions will require a better understanding of what people value in their environment. The lessons learned from Blue Index will help Austin’s government agencies do a better job of protecting water resources and providing equitable, widespread access to the benefits of being near water.

Jessica Wilson, Education Manager of Austin's Watershed Protection Department (WPD), worked closely with Jeffery on the rollout of Blue Index. Wilson has devoted her career to water-related programs like creek cleanups and youth outdoor education. She points with pride to the city's participation in The National League of City's Connecting Children to Nature program, which recognizes that "Austin has a vested interest in ensuring all children in our city have the opportunity to connect with the natural world and help create the next generation of environmental stewards." The city has adopted a *Children's Outdoor Bill of Rights* (COBOR) which holds that all kids have a right to splash in a creek or river, among other outdoor activities.

In nearly a decade with WPD, Wilson says that, typically, her department hears from the public only when something is going wrong. "One of the things that I love about Blue Index—it's an opportunity to hear why community members enjoy a water space. We get a lot of calls when people are unhappy about things, but we don't often get calls that say 'I really just enjoy this view and my life is better because of this. Blue Index provides data on what residents value and quantifies that.'"

Wilson particularly appreciates the photo component. "We like seeing what inspired someone to snap a picture—people really love turtles! Plus, the photos are a time-lapse series of how a water body changes through the seasons and that influences how people feel about these places."

Insights into the way people perceive Austin's natural waterways suggest ways to enhance community well-being and resilience and where to invest for the greatest benefits. The results of Blue Index will be used by the Austin Watershed Protection Department to develop narrative criteria for assessing outdoor spaces and clean water management practices. Wilson observes, "While city is growing very quickly, we want it to be a livable city that supports people's physical and mental health. Blue Index brings water to the forefront, instead of being taken for granted."

Jeffery had planned to present his results to the Austin Sustainability Commission this spring, but the COVID-19 pandemic put that on hold. In the meantime, he is refining his methodology and talking with other cities about how Blue Index could help guide their investments in outdoor water assets. "It's an easy way for cities to help people feel better," he says.

Blue Index will help cities like Austin better utilize and sustain outdoor water spaces to the benefit of residents and visitors, public and private enterprise, and the natural world on which it all depends.

As the program expands, Jeffery anticipates that “a common set of design, management, and policy principles will emerge to help communities make better decisions on where to invest resources for the greatest public value.”

Putting a priority on more access to waterscapes can help people suffering from short-term or long-term stress, provide economic benefits such as increased property values and tourism, and guide decisions on how to recover following a natural or manmade disaster. “With widespread usage,” Nichols predicts, “Blue Index could become a national index, like walkability, that inspires local governments to take action to secure a high score, and informs individual choices about where to live and recreate, and what to do today.”

Washington, DC Has Cleaner Air Now. But as Reopening Plans Continue, How Can It Keep the Pollution at Bay?

ETHAN GOFFMAN

Originally published June 29, 2020 in Greater Greater Washington

A pandemic induced shutdown is a harsh way to achieve cleaner air, but it has done just that. Air quality in DC is some 10 to 20% better than at this time last year, according to Tommy Wells, Director of the District Office of Energy and the Environment (DOEE). Indeed, the region “has yet to experience a day with unhealthy air quality in 2020.”

This is in part due to fewer cars on the road and more people walking and taking other modes of transit to get around—if they get around at all.

As the District reopens, however, what can be done to continue to keep pollution down?

A world of change in air quality

We are in a period of cleaner air around the planet. Greenhouse-gas emissions decreased 17% in April of 2020 compared to the prior year. Delhi, India, for instance, saw a drop of over 70% in harmful PM 2.5 particles and nitrogen dioxide, while in China cleaner air “likely saved between 53,000 and 77,000 lives,” although pollution has soared as restrictions have lifted, according to National Geographic.

DC already had an ambitious program to increase alternatives to cars, and measures responding to the coronavirus have accelerated this.

Our shared new reality “creates an opportunity to further reimagine our space, so that we can reward modes that have smaller environmental footprints,” said Payton Chung, chair of the Sierra Club DC Chapter’s Smart Growth Committee.

As we exit quarantine, whether quickly or slowly, can the DC region maintain some of the clean air benefits we've experienced?

The impacts of air pollution

Air pollution likely worsens fatalities from the coronavirus, according to a Harvard study, and certainly worsens other respiratory illnesses. And the increase in hot days due to climate change exacerbates air pollution in cities, an American Lung Association report explains, leading to more “high days of ozone and short-term particle pollution” over the past five years.

Washington, DC had already received a grade of F for ozone pollution, “also known as smog,” from the American Lung Association in a 2019 report. Local air pollution increases risk from asthma, chronic obstructive pulmonary disease, lung cancer, and cardiovascular disease.

This year, however, the District is experiencing clean, healthy air, with a 20% reduction in nitrogen oxide levels—which exacerbates asthma—even after accounting for weather, said Kelly Crawford, Associate Director, Air Quality Division, DC DOEE. She added that we are in the midst of “one of our longest” periods of good air quality days “ever without any ozone exceedances.”

There are some caveats. Heavy-truck traffic has remained at high levels. And teasing out how much of the improved air quality is due to decreased traffic, how much to our unusually cool, windy spring, and how much to other pollution sources, is difficult. Indeed, the DC, Maryland, and Virginia departments of the environment are collaborating on “experiments and observations and measurements, so that we can take a deeper dive” into which factors are most responsible for the region’s cleaner air, said Crawford.

And, of course, traffic is only one piece of the puzzle. Notably, “74% of our greenhouse gases are caused by energy use of buildings,” said Wells.

Still, reducing traffic is clearly an important part of our improved air quality this year. DC had already been working on reducing solo car trips and the shut-down provided opportunities to accelerate this.

DC takes some aggressive actions to increase transit alternatives—but is it enough?

The District has taken several steps to improve walking, biking, and transit, all of which reduce car traffic and lead to cleaner air.

“The District of Columbia has very far-reaching transportation plans,” Chung pointed out, as outlined in the Move DC plan. For Chung, though, the “level of detail” has been inadequate, leaving the District underprepared for the coronavirus.

“By 2020 there should have been many more miles of bike lanes on DC streets. We’ve been pleading for bus lanes on key corridors like 16th Street Northwest for many years.” Once the pandemic hit, it was “difficult to do the community outreach that is needed before making drastic changes to public spaces.”

While grand long-term plans with slow implementation is a pattern common to many jurisdictions, Chung pointed to Oakland, California as one city that was prepared to act swiftly and effectively. As early as April, Oakland restricted vehicle access on some 10% of its streets. And Europe has done much better than the United States; for instance, Paris has “convert[ed] more than 30 miles of major arterials ... into a network of bicycle-highways.”

Still, the District has taken many noteworthy actions, both prior to the pandemic and in response, that improve public transit and make walking and biking easier. On June 1, the city reduced the speed limit from 25 mph to 20 mph, a change intended to be permanent. And it has instituted a network of “slow streets” that limit cars to local traffic with a top speed of 15 mph.

One co-benefit of slower traffic is that it will help reduce pedestrian and bicycle injuries and deaths, a step toward DC’s Vision Zero pledge to eliminate deaths from traffic by 2024. A small difference in speed limit makes a huge difference in fatalities; when hit by a vehicle traveling at 20 mph, nine out of 10 pedestrians survive, but at 30 mph only five out of 10 survive.

Situated at seven locations in different corners of the city, the slow streets provide opportunities for walking, biking, and generally enjoying

the excellent weather, while staying the recommended six feet from others. While far from a connected network, the current “slow streets” are only the first phase, with future expansion to be announced. The long-term ideal would be “to create a network of slow streets connecting all of our neighborhoods through all eight wards of our city, absolutely,” said Cheryl Cort, Policy Director of the Coalition for Smarter Growth.

Additionally, DC is expanding sidewalks “near grocery stores and other essential retailers” as well as adding outdoor space for dining. These amenities, which will make outdoor life far more pleasant for strolling, dining, and generally contemplating life, are meant to be only temporary. And the city has closed roads to cars in Rock Creek Park, Fort Dupont and Anacostia Park, creating other islands of walkability and bikeability.

The city has also taken advantage of the pandemic to accelerate programs to improve bus service. Plans for dedicated bus lanes on key routes that would move more people more quickly, had long been on hold but have finally been coming to fruition in the last year or two. The District has already created dedicated bus lanes on H and I Streets and 16th Street, and is accelerating plans on 14th Street and K Street.

In a fresh piece of good news for transit advocates, the DC government has announced that it will “assign lanes and prioritize signals for the Lifeline Network bus corridors,” 27 key routes considered essential to the region. Cort expressed excitement that “the city is moving quickly on dedicated bus lanes and signal priority.”

The city is also finishing key protected bike lanes on Irving Street and elsewhere. Cort praised these efforts but hopes the city can do even more, arguing that “this is the time for overdrive in making bicycle commuting safe and accessible.” Indeed, she argued that we need protected bicycle lanes across all eight wards.

A question of access—and justice—for all

Cort pointed to a hospital worker who rides his bicycle on the sidewalk all the way from Congress Heights to the Howard University Hospital. “A worker like that should have a nice, safe connected bike route on slow streets, that’s on dedicated bike lanes and protected trails,” she exclaimed.

Lack of bicycle routes is only one part of deeply entrenched patterns in low-income and black and brown communities. Impacts from traffic accidents and poor air quality are particularly harsh for these groups.

One area where the District has done well is in spreading the new walking and biking routes created in response to the coronavirus throughout DC, providing access to various communities. However, disparities remain.

Changing street dynamics around grocery stores are happening “generally in better-resourced neighborhoods,” said Chung. Cort pointed out that there “aren’t a lot of grocery stores East of the River,” one of many long-term equity problems.

Heavy trucks are also a problem, since “we tend to see facilities that house diesel fleets being located in lower-income and black and brown neighborhoods,” said Lara Levison, chair of the Sierra Club DC Chapter’s Clean Energy Committee. She added that, “more hotter days, more ground level ozone and the health impacts are greater on folks who work outdoors, and folks who are in poor health who more often are low-income people and people of color.”

Long-term inequities entrenched in neighborhood infrastructure require extra effort. Chung recommended more public outreach to find ways to address “unsafe conditions in areas that have historically had fewer resources.” New efforts can be linked to the current protests, which encompass not just police violence but inequities in multiple arenas.

What of the future?

With synchronicity between DC’s long-term transportation plans and COVID-19 measures for more open streets, many of the current changes could become permanent, altering the way the city gets around. And greater teleworking is also likely to reduce congestion, particularly during the morning and evening rush periods.

Still, the situation for public transit is problematic, as bus and rail systems face financial problems from drastically reduced ridership and long-term fear of returning to crowded buses and trains.

Yet concerns about public transit spreading disease are hugely overblown. According to a recent Atlantic article, new studies of Paris and

Austria showed zero COVID-19 infection clusters could be traced to transit systems. In Hong Kong and in Japanese cities, places enormously dependent on public transit, COVID-19 numbers have been relatively tiny.

One measure that could boost transit is already before the DC Council; a bill introduced by Councilmember Charles Allen (Ward 6) that would subsidize public transit \$100 per month, per resident. “If that goes fully into place at the same time that people are going back to work, then we’ll see if that will be a major shift,” said Wells.

Transit has recently received a boost from the ongoing protests, with a 150% ridership increase on a single Saturday. Already, the partial opening of the region has pushed an expansion of Metrobus service. Yet transit remains fraught with uncertainty.

Chung had a couple of suggestions. As traditional rush hours lessen, “the transit system will have to adapt to lower levels of ridership spaced out over a longer time period.” He suggests studying methods such as increased ventilation to decrease the risk of contracting the virus.

Overall, then, better pedestrian and bike routes, slower traffic, and more telecommuting have all accelerated during these difficult times, and that has helped to reduce pollution and improve air quality.

SECTION III

**COVID-19: THREATS &
OPPORTUNITIES**

Coronavirus and the Public Good

ANN KINZIG AND SHADE SHUTTERS

Originally published March 18, 2020 in The Progressive

It's an election year, and Americans are debating big issues: capitalism and socialism, the role of government, the future of health care. These issues reflect what some see as a conflict between individual well-being and the greater public good. Do we want an up-by-your-bootstraps society where people mostly look after their own, or do we want a strong safety net for those who fall on hard times?

Now the coronavirus is upon us. In its shadow, the line between individual well-being and the public good is harder to see.

Consider this: a friend recently went to the drugstore to buy hand sanitizer. But the shelves were empty, and the clerk said, "The guy before you bought 20 bottles and cleaned us out." No doubt the hoarder thought he was protecting himself and his family. But in fact, he'd be safer if more people in the community could clean their hands. Hand sanitizer is now a public good.

This plays out at a larger societal level, too. Unlike most developed nations, the U.S. lacks a safety net of subsidized health care and paid leave. That means uninsured, low-wage workers have little choice but to work when they are sick. Many of those workers serve the public in a hands-on way—toiling in fast-food restaurants, caring for the disabled and elderly.

You may not agree that "health care is a human right," but it should now be more obvious that everyone is safer if the sick can get treatment and stay home when ill. In other words, we protect ourselves by protecting others.

A robust public health system is also a public good. But in 2018, the Trump administration cut funding for efforts to identify and contain emerging health threats abroad—including in China, where the coronavirus originated.

This may reflect a desire to put “America First” and push back on free riders who benefit from our investments without ponying up. But here, too, undermining the greater public good could hurt us.

The coronavirus also sheds new light on the role of government and the free market. In our increasingly globalized, *laissez-faire* economy, corporations understandably make decisions that boost their bottom lines. With globe-spanning supply chains and “just-in-time” inventory, corporations save money on parts and labor while avoiding sunk costs.

In a crisis, those supply chains can snap and inventories can be quickly depleted. For a corporation, the effects can be minor and temporary—headaches and lost profits. But the cumulative costs to society could be much greater and longer-lasting, including life-threatening shortages of medicine and food, economic disruption and civil unrest.

In fact, the public good is not served by free markets but by what economists call “complete markets”—those that reflect the true social cost of how we use resources. Governments should incentivize businesses to bring their private interests in closer alignment with the public good and ensure we maintain emergency stockpiles of essential resources, even if it costs money in non-crisis times.

Whether our political instincts are liberal or conservative, the coronavirus crisis should remind us that in many cases we help ourselves by helping others.

It's Time to Sound the Alarm for Communities Most Vulnerable to the Coronavirus

MUSTAFA SANTIAGO ALI

Originally published March 17, 2020 in U.S. News & World Report

The spread of the novel coronavirus and the disease it causes, COVID-19, is driving massive disruption of financial markets, exposing huge gaps in government preparation and focusing worldwide attention on citizen health. Amid the upheaval, however, we still find that those who are far too often unseen and unheard are once again in the crosshairs of disease and death. These are truly our most vulnerable communities: lower-income people, people of color and indigenous peoples.

After 20-plus years of working at the highest levels on responses to both natural and man-made disasters, I know firsthand what can happen to vulnerable communities when their lives and unique challenges are ignored while governments struggle to react. We must prioritize underserved communities by being willing to place the resources and expertise in the areas that are most at need.

Public health pioneer and former Army Surgeon General William C. Gorgas explained it best when he said, “In times of stress and danger such as come about as the result of an epidemic, many tragic and cruel phases of human nature are brought out, as well as many brave and unselfish ones.” We are now at the eve of the coronavirus epidemic and it provides an opportunity for us to be brave and unselfish. If we fail, our most vulnerable—those always hit first and worst—will unfortunately pay a higher cost.

Let me break it down for you: There has been a health crisis in vulnerable communities for decades.

Yes, the elderly are among those most in danger from infection by the COVID-19 virus. But people in communities that have been impacted by pollution for decades are also in danger, because they face an elevated risk of underlying conditions that increase vulnerability to the coronavirus.

Front-line communities feeling the disproportionate impacts of pollution are dealing with serious chronic medical conditions and underlying health problems, and no one seems to be talking about them in a substantive way. These communities are more at risk of cancers, high blood pressure, chronic respiratory disease, diabetes and liver and kidney disease—just to name a few daily realities of the public health crisis, in the absence of environmental justice.

These communities are also dealing with a serious lack of trust in their government, spurred by numerous rollbacks of basic protections needed to protect their health and their lives. And trust is essential in an epidemic, when individuals are asked to make sacrifices for the greater good.

To compound the public health challenges already facing front-line communities, we have more than 80 million people in our country who are uninsured or underinsured and forced into unacceptable choices between purchasing their medicine versus putting food on the table. As the economy slides, workers face layoffs and unpaid sick days, threatening to push an untenable situation over the brink. What can low-income folks do, without insurance and financial resources to draw on in a crisis?

Many of our communities of color—in both rural and urban areas—are also living in medically underserved areas, needing to travel great distances to reach basic health care. Research has highlighted that there is racial bias in medicine that leads to worse care for black and brown people and that the treatment often received is substandard. Having this knowledge means we have to put safeguards in place as doctors are deciding who will and will not get testing for the virus, and who may be left exposed to unnecessary harm.

The question for many communities of color is quite simple: *Why* would we trust an administration that has never prioritized our lives in the last three years to do so now? Former President Barack Obama shared with the country that “if the people cannot trust their government to

do the job for which it exists—to protect them and to promote their common welfare—all else is lost.”

For millions of Americans, all soon could be lost if we don't also prioritize the lives of those who are often unseen and unheard.

COVID-19 Threatens Our Prospects for a Clean Energy Future

DENISE FAIRCHILD

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Let's start with the good news. Mother Nature is catching some fresh air. She is breathing again—at least in the short run.

COVID-19's near-shutdown of the global industrial economy has dramatically reduced mobile and industrial sources of carbon emissions. The effects are so powerful that they can be seen from space—as in these satellite images of China.

Much of the world has come to a literal stop. Only essential workers and businesses are operating in many places. In several areas, there are no schools open, no office work, no crowds and no traffic.

It is the stuff that, if sustained, could drastically reduce our carbon emissions, giving us a fighting chance to stave off the worst impacts of climate change. Unfortunately, while never returning to work or school again or just shopping online might be appealing to some, this is not probable as a sustained lifestyle.

The bad news is that COVID-19 is a health crisis of epic proportions, wreaking untold havoc on our families, communities and the economy. The meaning of “intersectionality” was never clearer than now, when many communities face multiple, intersecting threats.

For example, people in low-income communities living in energy ghettos with toxic hazards are more vulnerable to COVID-19 because they suffer higher rates of respiratory conditions like asthma. Those communities are also more vulnerable to economic fallout from the pandemic, as the lowest-paid workers are losing jobs or going without pay, and small businesses are shuttering.

What's worse is that we are likely to lose ground in the fight against civilization's biggest existential threat: climate change. Reduced emissions from the pandemic are likely to be short-lived, but impacts on the global fight against climate change could be long lasting—unless we speak out now.

The 2018 United Nations Framework Convention on Climate Change report gave us 12 years to fix our carbon problem or suffer the long-term consequences. Those include life-altering ecological impacts; more frequent and extreme weather events; compromised food and water systems; diseases; and loss of life-supporting animal species.

It was a call to action. The climate clock is ticking. We are down to 10 years.

Before the pandemic hit, there were many signs of hope. Despite federal abdication of the Paris climate agreement, city and state governments and the private sector were making substantial commitments to become a net-zero decarbonized economy.

Climate and resilience plans proliferated. Over 100 cities committed to using 100 percent renewable energy by 2040 or 2050. All sectors of the economy were targeted.

The challenge is great, and so are the opportunities. It entails decarbonizing our built environment, including manufacturing, transport, construction and operations; converting combustion engines in cars and buses to electric; replacing highways with mass transit systems; eliminating fossil fuels in our power sector; decarbonizing the food sector; and bringing renewable power within reach of every community. Most encouraging are the growing efforts to prioritize clean energy investments in climate-vulnerable communities and to ensure that minorities, women, veterans, small businesses and workers are not left out of the clean economy.

The pandemic and the tanking economy jeopardize this progress and dim the prospects for strengthening America's resilience. Cities and states no longer have the luxury or bandwidth to advance climate plans while tackling the pandemic.

Consumer demand for building efficiencies and green building technologies evaporates in a weak economy. Investments for solar tax credits are useless in a bear market. The projected loss amounts to 120,000 jobs and \$43 billion in investments.

The \$2 trillion emergency stimulus package passed by Congress last week provides much-needed relief for American workers and businesses ravaged by the pandemic. It is silent, however, on the impact of COVID-19 on urgent climate work.

This stopgap measure fails to deliver a stimulus and strategy to rebuild America. This calls for a comprehensive resilience program for America rooted in fortifying our public infrastructure against future disasters.

The vulnerabilities fully exposed by COVID-19 offer a crystal ball into the consequences of a global climate pandemic. Climate impacts are also intersectional in scope.

Climate disruptions are already impacting our food, water, public health systems and economy. A climate stimulus needs to be transformative in scope.

COVID-19 is teaching us that an effective climate stimulus would first and foremost build resilience in the most vulnerable communities, addressing persistent health, income, wealth and racial disparities and inequities. It would build a resilient health system and universal health access.

It would invest in a more robust and diverse workforce and business sector that can rebuild our infrastructure to be greener and healthier. And it would ensure that this new economy guarantees a living income for all families, so that they can be resilient under all circumstances.

But in a deeper way, we need to reflect on what COVID-19 tells us about resilience and ways to reclaim our humanity, strengthen our social capital and give greater homage to Mother Nature. If we learn one thing from COVID-19, it is that Mother Nature really has the upper hand.

In a Pandemic, We Need Green Spaces More Than Ever

CATE MINGOYA

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As we settle into our new normal—two parents working from home with an active 2-year-old—my family is in a constant search for age-appropriate, socially distant entertainment. The few playgrounds near us are padlocked shut to keep kids off the slides and swings, and each day is a new hunt for opportunities to burn off energy. When my husband and daughter left the house today to get some fresh air, I asked them to bring home sticks for a crafting project. But even after a lengthy walk—at least by 2-year old standards—they came home empty handed. There simply weren't any sticks to be found.

Our neighborhood stick shortage is connected to a much larger national problem. My beloved hometown of Somerville, Massachusetts, is one of the densest cities in New England with little green space compared with other cities in the state. The sparse tree canopies and extensive pavement in my city have little to do with neighborhood preference and everything to do with a long history of federally backed housing segregation.

In the 1930s, the Home Owner's Loan Corporation created a series of "residential security maps"—redlining maps—designating black and brown communities as too risky for investment and ineligible for newly available federally backed mortgages. Even though redlining was outlawed by the Fair Housing Act in 1968, we are still prying loose its grip today.

Redlining locked in patterns of poverty and disinvestment. It denied mortgages to black families, cementing a racial gap in homeownership and wealth that has persisted into the 21st century. Formerly redlined neighborhoods still have relatively low homeownership rates, home values and credit scores. Our neighborhoods receive fewer services and investments:

We get the bus depots and sewage treatment plants; others get the parks and street trees.

As a result, my neighbors are more vulnerable to climate change. Lacking substantial tree cover and green space, new research shows that formerly redlined neighborhoods are about 2.6 °C (4.7 °F) hotter, on average, than comparable communities. Low-income communities of color are literal hot spots for the urban heat island effect—a deadly impact of climate change. Impermeable surfaces and a lack of green space also make our neighborhoods more vulnerable to flooding, and many of my neighbors may be unable to absorb the costs of these crises.

Today, our communities are likely to be disproportionately harmed by the health, economic and social costs of the COVID-19 pandemic. The pollution sources clustered in our neighborhoods mean poor air quality and soaring rates of asthma and other respiratory diseases, underlying health conditions that increase the severity of COVID-19. And sparse green space will make it harder for us to stay healthy and sane while limited in our activities.

But there is hope. Across the country, community members, activists and organizers are fighting back. They're drawing attention to the legacies of redlining and pushing policymakers to address the harm caused by these racist policies. In five cities—Denver, Colorado; Elizabeth, New Jersey; Richmond, California; Metro Providence, Rhode Island; and, Richmond, Virginia—residents of formerly redlined neighborhoods are working to make their communities greener, safer and more equitable. Partnering with five local trusts, my organization, Groundwork USA, launched the Climate Safe Neighborhoods Partnership to use data-driven community organizing to make our formerly redlined communities safer from the impacts of extreme heat and flooding—and now coronavirus.

The Climate Safe Neighborhoods Partnership helps educate communities about the relationship between historical redlining practices and current climate risks. We then work with residents to prioritize changes they'd like to see in their communities and build the capacity of community leaders to intervene in municipal budgeting, planning and decision-making.

In New Jersey, for example, seasonal flooding leads to frequent overflows of wastewater from sewers directly into the Elizabeth River, exposing residents to untreated wastewater. Groundwork Elizabeth's Climate Safe Task Force is working to bring community voices to the county's plan to design the sewer system. In Colorado, Groundwork Denver is empowering residents to organize and advocate for green-space funding to combat the disproportionately high temperatures and flooding experienced in their neighborhoods. In Virginia, Groundwork RVA is doing door-to-door community education and capacity building so that impacted residents can advocate for green community infrastructure in the city's Master Planning process.

The projects are different, but the goals are the same: to empower disinvested neighborhoods to become more resilient to disasters of all kinds, and to make sure that people who live in these neighborhoods are driving that change.

For me, this is personal. I want my daughter to grow up with green space to run in and clean air to breathe, under the cooling shade of trees. I want her to be safe from the heat waves, floods and pandemics of the future. I want her to know that fighting for justice and the safety of others is just as important as fighting for herself.

I know that my neighborhood isn't barren of sticks by accident, and it isn't going to get better by accident. As writer James Baldwin once observed, "history is not the past. It is the present." Racist history makes low-income communities of color more vulnerable to crises—from climate change to COVID-19. Understanding that, we can we address the root causes of the problem and, most importantly, solve it.

Building Science and the Prevention of COVID-19

BETH ECKENRODE

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Let's be clear, building science will never take the place of essential, individual behavior, like social distancing, handwashing and limiting the frequency with which we touch our faces. However, there is strong evidence that building science has a role to play in controlling indoor environmental quality, which, in turn, can control the spread of viruses like COVID-19.

The benefits of controlling a building's environment go well beyond preventing the spread of viruses. In fact, it's the first step to significantly lowering energy costs, reducing carbon emissions and improving indoor air quality for everyone. There are a few steps that are essential to operating high performing buildings. Good news: it doesn't cost a premium to reach these levels of performance.

High Performance Starts With The Building's Envelope

The gold standard for controlling a building's environment is Passive House, which relies on a few fundamental principles that result in ultra-low energy use and ultra-high indoor air quality. In the simplest terms, Passive House looks holistically at buildings and sets expectations for building performance in operations.

Designing and constructing a high-performance building envelope is the first step to achieving the Passive House standard. Embedded in Passive House are performance expectations for ventilation, airtightness, fenestration, climate-specific insulation, and the elimination of thermal bridges. Once a plan includes a high-performance building envelope, decisions around active mechanical systems and renewables become cheaper and easier.

Many building owners and developers make the mistake of putting the discussion of renewables at the beginning of a project. Whether building new or renovating an existing building, the discussion of renewables should always come last after building loads are reduced. This small point is a key indication of a team's willingness or ability to look at a building's design and/or construction holistically.

Control Over Ventilation Brings Broad Benefits

Passive House's role in controlling the spread of viruses like COVID-19 rests in its required ventilation and filtration performance standards. While there are many ways to design ventilation to meet a variety of performance goals, ventilating with outdoor air is essential to controlling the spread of viruses and diluting airborne contaminants.

Recently, Timo Smieszek, Gianrocco Lazzari and Marcel Salathe published the results of a study that centered on a US high school. The study looked at the potential of ventilation to control droplet- and aerosol-transmitted influenza. The study found that bringing ventilation to recommended levels had the same mitigating effect as a vaccination coverage of 50-60%. These findings imply that building science-based design and construction can, indeed, play a role in controlling the spread of viruses in buildings.

Filtration Without Sacrificing Performance

Passive House also sets high standards for air filtration, requiring MERV 13 or higher for outdoor air filters. Research shows that high-efficiency air filters can remove 99.97% of particles that are 0.3 microns in diameter. HEPA filters are largely recognized to have MERV values between 17-20. These filters have been shown to remove dust, vapors, bacteria, fungi and effectively capture viral particles that may transmit infections.

A Little Humidity Goes A Long Way

Viruses prefer dry environments. Using highly efficient ventilation systems with heat and energy recovery to boost humidity takes some thought, because humidity must be balanced with temperature to keep building occupants comfortable. We recommend building owners consider how they want to balance temperature and humidity to accomplish their thermal comfort goals. Research suggests that a modest increase in humidity levels could be a scalable intervention to decrease influenza or other viral outbreaks.

Connect Goals to Operations

There has never been a better time, in terms of public awareness and technological innovations, to begin monitoring and measuring your building's indoor air quality. One way to do so is with RESET Air, an international performance-based standard and certification program for healthy buildings. RESET Air continuously measures and displays air-quality data in real time, using monitors to track particulate matter (PM2.5/PM10), carbon dioxide, total volatile organic compounds, temperature, and relative humidity. Results stream to the cloud and can be viewed from any computer or mobile device

RESET Air is comprised of three distinct standards. First, RESET Air's Accredited Professionals develop the monitor deployment plan for a building. RESET Air then accredits monitors, which must be commercial grade. Lastly, RESET Air Accredited Data Providers ensure the reliability of performance data measured and reported to building occupants.

The benefits of monitoring and measuring indoor air quality performance provides assurances that your building is performing as expected and doing the best it can to prevent the spread of viruses like COVID-19.

Why it Matters

We know that, on average, Americans spend approximately 90% of their time indoors where the concentrations of some pollutants are often 2 to 5 times higher than typical outdoor concentrations. As we battle COVID-19, our time indoors is only increasing. Doing our part as humans to reduce the spread of viruses is essential, but the performance of our buildings can complement—perhaps even enhance -- our individual contributions. Passive House and RESET Air are two affordable performance standards that provide enhanced levels of ventilation, filtration, measurement, and verification to alleviate the spread of COVID-19.

Investing in a Good Food Future

PAULA DANIELS AND ALEXA DELWICHE

Originally published May 22, 2020 on Medium

As we look ahead to re-open the country post-COVID, we also have the chance to re-work our public relationship to our food system, and mend its broken aspects in a way that will better meet community needs and values in our “new normal” future. Highlighted during this time is the food insecurity of much of our population, and the fragile aspects of the food supply chain.

The shutdown of food service has left many farmers and food processors dangling with an estimated \$689 million decline in sales, imperiling livelihoods. Food products from a hyper-efficient and vertically integrated supply chain are also more vulnerable than before, as shown by the threat to commodity meat supply due to virus outbreaks in the small number of packing plants remaining, a consequence of extreme market consolidation.

We’ve already seen how local governments have been the command centers of the frontline responses to the public health crisis and its economic fallout. They’ve also been immersed in food distribution through school food and food banks, and are learning how to match unused restaurant capacity with the growing community need for meal support, as with the model of the World Central Kitchen.

Local governments can take the lessons learned from their impressive crisis coordination efforts to address the underlying distortions in the food system revealed in this pandemic. Pre-COVID, there was increasing recognition that long, globalized supply chains (local food is at an average of 10% per region) and the bloated production of commodity crops created paradoxes of poverty in the midst of plenty. The largest agricultural regions had the worst food access problems, and the highest rates of poverty, diet-related disease, air and water pollution. And, while food picked and packaged by this low wage, primarily immigrant workforce

was exported, disadvantaged urban communities were suffering from disproportionate levels of diabetes and obesity because local markets were awash in junk food that was cheap in cost but high in calories and low in nutritional value. It was partly a problem of equitable distribution, starkly highlighted now.

And while we were feeding the world, we were starving our soils, stripping them of their natural nutrients by industrial-style farming techniques for the sake of economies of scale. There has been growing awareness of a host of other problems, such as the discharge of pollutants to air and water, the dwindling viability of our millions of smaller farms, and the extraction of labor to pick, process, package, deliver and serve. In other words, our relationship to food was largely abstracted into opaque commercial transactions with consequences invisible to the plate.

In the last decade, cities have increasingly recognized their leading role in upgrading food systems to comport with 21st Century values of people and planet. The Milan Urban Food Policy Pact, created in 2014, is an international pact of 209 cities from around the world, representing 450 million people. The signatories (only nine of which are US cities) agree to be monitored for their commitment to the pact, which includes interdepartmental coordination for food distribution through the lens of social protection, nutrition, and equity, through shorter supply chains—meaning, a closer and more visible relationship between supply and demand. The C40, a network of the world's megacities recently launched a Food, Waste and Water Initiative; last year, Los Angeles Mayor Garcetti (currently the C40 chair) joined 13 other cities in signing a Good Food Cities Declaration, which includes a commitment to use their purchasing power for planetary and dietary health.

We have an opportunity now to assure quantifiable progress toward the goals to which our cities have committed.

In the ten years since we created the first food policy framework for the City of LA and launched the Los Angeles Food Policy Council, a program we developed to evaluate public food purchasing is now in 40 public institutions in 18 cities around the country. We've been working closely with regions, including New York, Minneapolis, Colorado, Chicago, Cincinnati, California, Austin and elsewhere on their food system goals.

What we've learned is that food system change works most effectively and comprehensively where certain core elements are in place: a collaborative, multi-sector coalition (like a food policy council) focused on a localized food system with shared values of community, equity, economic and environmental health; quantifiable goals to direct the purchasing power of large anchor institutions (such as schools and hospitals) toward increasing economic viability along a values-based supply chain; supply chain infrastructure that includes mission-driven centers of aggregation and distribution (food hubs); and local government leadership connecting the dots within and across the many city and county agencies that intersect with food—which should include the workforce and economic development teams, since our essential food system workers are around one sixth of the nation's workforce.

Those regions with these elements in place, and the political will to commit to a public relationship to food through accountability and transparency in targeted purchasing goals, can make impressive incremental shifts in supporting their local environment and food economy, including job creation. Through the data we've been collecting over the last several years, we've seen institutions double their food purchases from local producers, with 22% of public food dollars invested into the local economy and creating hundreds of new jobs. The institutions with whom we work have also markedly increased their purchases of environmentally sustainable and fairly produced food.

A “Good Food” system—one that is rooted in community resilience, equity, sustainability, and health—should be built on those pillars, in these ways:

- Increase the economic viability of regional high road, small business and earth friendly producers by establishing aggregate regional purchasing targets from anchor institutions, such as school districts, hospitals, universities, and jails.
- Back up those targets through contractual commitments, and agree to tracking and public reporting on progress towards the collective regional goals.
- Develop and direct financial incentives through those Good Food supply chains to enable purchasing support for fair wages

and climate-friendly food production practices such as soil health. Incentives should include an increase in school meal reimbursements for the procurement of local, sustainable, fair, and humanely produced foods to provide all students access to nutritious, high-quality, local food, building on the pioneering local food incentive models established in Michigan, Oregon, and New York.

- Dedicate a permanent stream of government funding for value-chain innovation among regional suppliers to create those shorter supply chains. That could include mission-driven distribution infrastructure in food hubs dedicated to intermediary work between local small- to mid-sized farmers and food businesses, and public institutions, neighborhood markets and community serving organizations. Those areas that had such mission-aligned food hubs were able to pivot quickly toward redirecting their supply chains to areas of need, such as the The Common Market, which provides support for local farmers and emergency food relief in New York, Georgia, and Texas. There should also be investment in localized and decentralized meat, grain, and produce processing facilities that support local ranchers and growers to enable their operations to get to mid-scale; and infrastructure upgrades such as the \$500 million bond measure passed in 2012 in Oakland to build a central kitchen for the school district and serve as a food hub, community kitchen, and learning garden.
- Invest in soft infrastructure, the people power to coordinate and integrate the complex ecosystem of cross-sector partnerships between the public, private, and civic sectors critical for building, maintaining, and activating strong local and regional food systems, especially during times of crisis.

These actions would be investments in local, well-paying jobs, regional economic development, small business support, capital infrastructure and equipment, as well as in the health of our planet and people. They would also foster supply chain transparency and public accountability, attributes of good governance that should apply to our food system in greater measure. During this crisis, we've seen how necessary it is to have clear lines of coordination along the supply chain. Transparency, oversight

and robust coordination will facilitate a system to serve community needs at all times—especially in times of crisis.

Municipal leaders could commit to using these strategies to ensure that perhaps 30% of the regional food supply will function in this Good Food system by 2030. Cities achieved similar goals when they adopted renewable portfolio standards and committed to, for example, 50% renewable energy by 2030, aligning public policies behind those targets. We could generate similar modern upgrades in our food system, which—as we are realizing more than ever—is even more of an essential public good than energy.

U.S. Economy Needs to Reset, Not Restart

CALVIN GLADNEY

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The disproportionate COVID-19 related death rates and job losses suffered by communities of color in the United States are a stark reminder of the glaring systemic inequities baked into our economy.

Getting back to “normal” will only serve to deepen these disparities. Instead, we need a top-to-bottom shift in our economy that puts the health, prosperity and resilience of all people—whatever their race, class or gender—as our core priority.

That means rethinking our automobile-centered way of life. The dramatically cleaner air we’re now breathing, and the steep decline in traffic crashes are examples of what can happen when we drive less and share the road with pedestrians, cyclists, the mobility-impaired and public transit.

Cleaner air and fewer cars on the road will save lives and promote equity. On average, nearly 100,000 Americans die from air pollution each year. Members of minority populations and people of lower socioeconomic status are exposed to more traffic and vehicle-related air pollution, which a new Harvard study shows contributes to higher COVID-19 death rates. Moreover, traffic crashes disproportionately kill pedestrians who are minorities.

We need to rethink our basic assumptions about what is possible and advocate for systems-level change. For example, Seattle and London both temporarily closed many streets to vehicle traffic to improve social distancing, but quickly realized the potential for ongoing health benefits. Seattle plans to permanently close 20 miles of streets to most vehicle traffic, and London plans to transform 22 miles for cycling and walking use.

To bring about systemic change, we must incentivize what we want and penalize what we don't want. For example, transportation is the nation's largest emitter of greenhouse gases, and the vast majority of those polluting and climate-changing emissions come from vehicle miles traveled (VMTs) in cars. States and communities must measure VMTs per capita and set goals for their reduction.

Finally, to promote equity and resilience, we need to think more holistically about affordability. Often, especially for people of color, it's the combination of costs from housing and transportation that make communities unaffordable. That's why sprawling, auto-dependent Houston is now less affordable than New York City, and why we can't solve racial wealth disparities by focusing solely on housing costs.

The federal government deems housing affordable if it comprises less than 30% of one's income. A more holistic approach would deem a community affordable if no more than 45% of a person's income were spent on housing plus transportation. To achieve that goal, we must fund more affordable housing and support public transit, transit-oriented development, and pedestrian and biking infrastructure in communities of color and suburban and rural communities.

The COVID-19 pandemic has forced us to reset the rules and take bold actions. Let's not lose that boldness going forward. Let's completely reimagine what and where we build, who and what we invest in, and who is at the table when all of those decisions are made.

This will bring about a healthier, more equitable, and more climate-resilient life for all Americans, and a world we can be proud to hand off to future generations.

Resilience in the Face of a Pandemic: Green Affordable Housing Matters More Than Ever

KIMBERLY VERMEER AND WALKER WELLS

Originally published May 29, 2020 in Shelterforce

In the urgency of the moment, affordable housing organizations are understandably focused on the health of their residents and vitality of their organizations. Green building may seem like an unaffordable luxury at a time like this, but by making buildings healthy and sustainable, we can help build resilience to the COVID-19 pandemic and to future health and climate threats.

Organizations that previously committed to sustainable, green building practices—energy and water efficiency, good ventilation, and nontoxic materials—may find that they and their residents are better able to withstand the stresses of this pandemic. Even though those projects may not have been planned and built with a pandemic in mind, the core elements of green building create conditions for better resilience in the face of a sudden global health threat.

First, the healthy housing elements of green building provide defenses against respiratory illnesses and airborne vectors. The more stringent fresh-air ventilation and filtration requirements of green building standards can reduce exposure to viruses. In multifamily housing, air sealing that creates compartmentalization for individual units—isolating each unit from surrounding units and common areas—results in a lower likelihood of cross-unit exposure or contamination. Durable and easily cleanable materials, such as hard-surface flooring, improve contamination control. Low-off-gassing paints and other finish materials and the prohibition of smoking—typical in green buildings—reduce the triggers for underlying respiratory illnesses such as asthma that may create higher risks with COVID-19. These are all well-known and field-tested green and healthy building methods.

Second, green affordable housing reduces utility costs. The shock of sudden job and income losses has left many unable to pay housing costs and utility bills. With lower costs for key bills, residents and property owners may be better able to manage, or at least be less overwhelmed, than those in conventional housing.

Third, organizations that build green affordable housing often place a high value on resident engagement and community building. These include Mutual Housing California, Aeon in Minnesota, and Habitat for Humanity Kent County in Michigan. Their developments typically include community spaces, resident services, and programming. Together, these generate social cohesion and an infrastructure that helps support residents in a crisis, and facilitates effective disaster response.

These benefits will continue long after the current crisis recedes. The future may bring more pandemics, and it will certainly bring more climate change impacts. Green affordable housing can help weather those crises, too. For example, well-insulated buildings can keep residents safe and comfortable during heat waves—the deadliest impact of a warming planet.

Building new green affordable housing or retrofitting existing buildings to green standards makes more sense than ever—to address unmet housing needs, to create housing that is more resilient against health and climate threats, to create jobs and to generate economic activity. Green building investments, which may have higher upfront costs, pay off with energy savings and public health benefits of equal or greater value.

Additional government subsidies and grants are urgently needed to resume the many green building projects that have been on hold for the past several months, or to provide the last piece of funding needed to get people back to work once the economy reopens.

COVID-19 is quickly changing how we think about the places we live, and about how we will design the new normal. Green building must be part of that vision. It offers a proven way to prevent—and recover from—a range of health and climate challenges. Importantly, green *affordable* housing ensures that these benefits reach the most vulnerable members of our communities and build their resilience in the face of an uncertain future.

‘Hold My Earrings’: Black Women Lead on Systemic Solutions in the COVID-19 Pandemic and Beyond

JACQUELINE PATTERSON

Originally published June 5, 2020 in Colorlines

“Hold my earrings” has come to be a literal and metaphorical phrase that signals that we as African American women are preparing for a struggle. Now, we are certainly facing perhaps the biggest struggle of my lifetime. In African American communities across the U.S., COVID-19 is taking our loved ones—our mothers, fathers, grandparents, sons and daughters, sisters and brothers—at an agonizing, disproportionate rate.

To comprehend this disparity, we have to unearth layers of oppression, from 1619 right up to this moment. That history (and present) is painful to confront—but understanding it is a kind of superpower: it enables us to see whole systems, and envision deep, transformative change.

Centuries of racist policy and practice have shaped the neighborhoods we live in, the air we breathe, the water we drink, the food we eat, our access to education and justice, and the health care we receive (or don’t). Layers of harm, generation after generation, alter our bodies at the molecular level and even the genes we pass on to our children. Those harms, past and present, render us more vulnerable to the coronavirus—and also to the longer-term crises caused by climate change.

We’ve all seen the “blame the victim” narratives pointing to high rates of obesity, diabetes and hypertension in Black communities as risk factors for COVID-19. All of that is true. Also true are the historical underpinnings of those diseases, including diets rooted in slavery as we had to survive on the scraps of meat not served at the master’s table. There is also the domination of big agriculture, which floods our stores with foods high in sodium, sugar, preservatives and other additives.

There's the enduring impact of redlining, which robbed our neighborhoods of resources and green space, making it harder to get exercise. And African Americans breathe far more deadly air pollution, which has been linked to a higher risk of death from COVID-19, as our lungs are already under daily attack rendering them less able to withstand the new assault. While fossil fuel companies draw billions of dollars in profit, our communities literally choke to death on their emissions.

When presented with “conspiracy theories,” it's hard for our communities to resist believing—with a history of human rights violations that includes unwilling experimentation on Henrietta Lacks' DNA and on scores of Black men through the Tuskegee experiment, coupled with the present day phenomenon of losing people at rates so high that the bodies can't be accommodated in morgues. All in a context where state-sponsored violence and murder of our communities is the order of the day. Most recently, the brutal murder of George Floyd, witnessed on video by millions, sparked collective outrage in cities across the country and the world.

It's not just racism that makes us vulnerable. Each marginalization factor—whether it's race/ethnicity, gender, immigration status, incarceration, LGBTQ orientation, age, geography, disability, or poverty—stands as a risk on its own. Those risks compound each other, causing double and triple jeopardy for individuals, families and communities.

It can be overwhelming to contemplate. On March 10, as the pandemic was fully coming to light in the United States, knowing what was to come given the known patterns of systemic inequities, I drafted “10 Equity Implications of the COVID-19 Pandemic in the United States.” When people first looked at it, the reaction was, “Wow! That's a lot. Can we sum it up somehow?”

Believe me, as an African American woman who works on climate justice, I know, it's a lot.

I also know that all of it, every layer, is important to understanding—and to solving—the problems we face. Yes, we can put it all in buckets, sub-categories and sub-bullets. But when people begin to summarize, the most vulnerable, the most marginalized populations, fall through the cracks—just as they do in the larger systems we inhabit.

Ignoring the intersections of injustice results in superficial “fixes” that fail to address underlying causes. During the pandemic, we’ve seen how such false solutions can set people back to a condition worse than their pre-pandemic baseline. For example, restricted transit services put essential workers, who are disproportionately African American, in harm’s way as we cram into limited bus lines. Blanket policies to shut down services mean that fragile families with young children don’t have access to social services; that women don’t have access to reproductive health care or shelter from the surge in domestic violence; that people aren’t being treated for chronic illnesses that leave them most vulnerable to fatality from COVID-19. And then there are stories upon stories of people being turned away from hospitals and told to provide self-care at home, which has been a death sentence for too many families.

In the short term, we need emergency policy solutions such as cash payments, increased unemployment insurance, student debt deferments and moratoriums on utility shut-offs. In the long term, we need transformational policies aimed at shifting away from the “winner takes all” capitalist economy. That includes policies to end pollution and over-policing in our communities, as well as militarization at home and abroad, as well as policies to support immigrant rights, disability rights, gender justice, LGBTQ rights and more. It includes policies to support energy, food, water, and land/housing sovereignty; transit equity; universal access to healthcare, livelihoods, broadband, childcare; quality education, and true democracy.

Fortunately, Black, Indigenous and People of Color (BIPOC) women who live at the center of so many intersecting injustices, understand the need for transformational change. Indeed, BIPOC women are taking the lead on systems change, both during the pandemic and in the ongoing climate crisis.

Through mutual aid and other efforts, BIPOC women are on the frontlines of feeding those who hunger now, while setting up locally controlled, sustainable food systems.

- That includes the folks at the Earthseed Collective in North Carolina and **Leah Penniman** of the Soulfire Farm in Upstate New York, who are growing a Black local food movement centered on care and cooperation.

- **Savi Horne** of the Land Loss Prevention Project is fighting for land stolen from Black families; **Jess Zimbabwe** is also advancing land justice for Black people.
- **Dara Baldwin** at the Center for Disability Rights is speaking truth to power about the “CARES Act”, the COVID-19 bailout that, as she says, “serves the interests of big businesses, while neglecting people with disabilities, women-owned businesses, people of color and immigrants.”
- **Stacey Long Simmons** of the LGBT Health Taskforce is working to make sure the LGBTQ community has access to care in the context of COVID-19 and climate change.
- **Kizzmekia Corbett** at the National Institutes of Health is leading on creating a vaccine for COVID-19 while using her social media platform to speak the truth on her analysis of the socio-political situation.
- **Monica Lewis-Patrick** of We the People Detroit is fighting against water shut-offs in her city; ensuring that all people have the power to claim the human right to water during the pandemic—and beyond.
- **Wahleah Johns** of Native Renewables and **Denise Fairchild** of Emerald Cities Collaborative are working to heal the climate and build sustainable, equitable local economies through community-owned, renewable power systems.
- **Favianna Rodriguez** of CultureStrike and **Jayeasha Dutta** of Another Gulf is Possible advance culture work which, in the words of Favianna, “empowers artists to dream big and disrupt the status quo.”
- **Huda Alkaff** of Wisconsin Green Muslims is anchoring critical work on Healing Justice, given the history of trauma and harms that our communities hold.
- **Mimi Ho** of the Movement Strategy Center constantly reminds us of the essentiality of “Leading with Love.”

There are so, so many more. With a bone-deep understanding of layered injustices, BIPOC women are working towards a world built on regeneration, cooperation, interdependence, and deep democracy, while resisting the deceptive lure of privatization and other false solutions.

The COVID-19 pandemic is the latest crisis to wreak outsized havoc on BIPOC communities and other groups that are often marginalized. In a warming world, it won't be the last. So, hold our earrings: BIPOC women are on the frontlines of risk, but we are also on the frontlines of transformational justice.

Rethink Resilience for the Era of COVID-19 and Climate Change

JALONNE L. WHITE-NEWSOME

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Last month, unusually heavy rain breached two aging dams in Midland, Michigan, forcing thousands to flee their homes. As the waters rose, displaced residents had to choose between risking exposure to COVID-19 in a shelter and sleeping in their cars. Further south in Detroit, where my mother lives, heavy rains and failing infrastructure caused sewage backups—yet another public health threat in an African-American neighborhood ravaged by the coronavirus.

Michigan is not unique. Across the U.S., climate change and COVID-19 are playing out in tandem. The warming planet drives increasingly extreme weather, compounding the pandemic's impacts and complicating disaster response. At the same time, these dual threats have exposed the profound inequities that divide and weaken us.

In the midst of these crises, Americans have been lauded for their resilience. But the praise rings hollow as we are asked to recover from tragedies that could have been prevented, and when the most vulnerable are asked to shoulder the heaviest burden. It's time to rethink resilience for the era of COVID-19 and climate change.

Resilience is typically defined as the capacity to bounce back after a crisis. A better definition comes from an organization called Dignity & Power Now in their Healing Justice Toolkit: "The purpose of resilience is not to build the capacity to endure more harm," they write. "We build resilience to be more skillful in confronting the systems that have harmed us."

That means reckoning with racism and other inequities that put some people at greater risk. We know that low-income communities and people

of color are hit first and worst by both climate change and the coronavirus. Across the U.S., African Americans are dying of COVID-19 at three times the rate of white people.

Much has been written about the health disparities that have cost black and brown lives in the pandemic. Those include unequal access to care, exposure to pollution, and the devastating physical and mental health impacts of racism. During the pandemic, I have personally seen friends and family turned away from COVID testing, treated with disrespect when admitted to the hospital, and—in some cases—coerced to sign Do Not Resuscitate agreements.

I have also seen the disproportionate impact of climate change on communities of color. Longstanding discrimination means that black and brown communities are often situated in less-desirable, flood-prone areas. And neighborhoods that were subject to redlining have more concrete than green space—making them more vulnerable to extreme heat, the deadliest impact of climate change.

While low-income communities and people of color are on the frontlines of COVID and climate change, they are also taking the lead on rethinking resilience. For example, Groundwork USA's Climate-Safe Neighborhood program is connecting the dots between redlining and climate change impacts. Through science, advocacy and community voice, they are working to make cities more sustainable and equitable.

Rethinking resilience means prioritizing resources for known areas of vulnerability, lowering barriers to prevention and treatment, and calling out racism within our systems and institutions. It means centering black, brown and low-income communities in crisis response. And it means seizing opportunities to make changes in our systems that will reduce vulnerability.

Information is power, and vulnerable communities need access to timely, accurate information to protect themselves. But that access has been lacking in both the climate and COVID crises. We need to democratize data, by collecting granular information on climate and health risks, fully disaggregated by race and gender. That data must be shared with affected populations, in multiple languages, to guide prevention and preparedness.

Finally, rapid response is key, because vulnerable communities do not have the luxury or privilege of time. In the pandemic and in climate crises, time can literally mean the difference between life and death; between a small disruption and a total disaster. Institutions and systems must step up by being adaptable and flexible, removing barriers that prevent resources—federal agency responses, deployment of stimulus dollars, water infrastructure—from getting where they are needed most.

Low-income communities and people of color are bearing the brunt of the COVID-19 pandemic, as well as the long-term impacts of a changing climate. In this context, resilience must mean more than enduring the unendurable, or bouncing back to “normal.” Real resilience demands that we recognize structural racism and rectify the injustices that rob black and brown people, and poor people, of agency and power. It demands that we rethink our responses to climate change and COVID-19, by remaking the systems that have harmed us.

How Urban Industry Can Contribute Green Solutions for COVID- Related Health Disparities

MARGARET O'GORMAN AND DANIEL GOLDFARB

Originally published June 29, 2020 on Meeting of the Minds

The coronavirus pandemic is taking a heavy toll on communities of color. One recent study found that Black Americans are dying of COVID-19 at three and a half times the rate of Whites. A CDC report suggests that this disproportionate burden could be linked to existing health differences, which are often present in communities with challenging economic and social conditions.

Within these communities, air quality contributes to negative health outcomes. A link between air pollution in the form of fine particulate matter and deaths from COVID-19 has been established, whereby “a small increase in long-term exposure to PM2.5 (fine particulate matter) leads to a large increase in the COVID-19 death rate.” In Italy, four regions of the Po Valley, an area characterized by high levels of particulate matter, saw 80% of all total deaths recorded in that country. Beyond COVID-19, fine particulates in air have been shown to “accommodate” a wide range of microbial communities, including many that drive negative health outcomes.

The negative health impacts of air pollution on low-income communities and people of color is well known, but the pandemic has brought it into starker contrast. While significant structural social change is needed to address these disproportionate burdens, a simple and affordable approach could alleviate some of the burden for families in vulnerable communities: more natural space. Trees clean the air by absorbing pollutants and also by acting as a physical barrier to particulate matter. Studies have shown that trees in cities across the U.S. remove 711,000 metric tons of particulates (\$3.8 billion value) annually.

When we think about trees in cities, we usually think about street trees that cool homes and sidewalks in the places where we live and recreate. Another part of the city, the urban-industrial edge, is a critical yet overlooked part of the urban ecosystem where nature can thrive and bring multiple benefits, and where canopy inequity is at its most pronounced.

All cities are edged with industry that ranges from heavy industrial operations, like steel mills and oil refineries, to infrastructure installations like electricity generation stations, transit yards, and waste and recycling transfer stations. In these unglamorous places, the city transitions from a place of human habitation and commerce, to a place where goods are manufactured, materials are managed, and impacts on air, water, and biodiversity are heaviest.

The intensity of the urban-industrial edge differs from city to city, depending on whether the city is a manufacturing powerhouse like Detroit, MI or Gary, IN; or a financial or political center like New York City or Washington D.C. The nation's capital, known for its monumental buildings, museums, and power lunch restaurants, has within or near its borders electricity-generating stations, concrete ready-mix facilities, water treatment plants, and a plethora of other businesses that require Risk Management Plans. These plans are necessary when businesses use, store, or transport hazardous materials.

Regardless of the intensity of the industry, one thing that all urban-industrial edges have in common is adjacent communities bearing an unequal burden of air, water, light, and noise pollution. In these areas, the private sector has an opportunity to create significant benefits by investing in nature in a way that goes beyond compliance and supports community uplift.

CommuniTree

On the southern shore of Lake Michigan, an alliance of industries, NGOs, the US Forest Service, and the National Parks Service have come together under the CommuniTree banner to advance nature as a solution to pollution, storm water run-off, and even climate mitigation on industrial lands. From East Chicago to the Indiana Dunes National Park, this alliance has planted over 5,000 trees on public and private lands in a cooperative effort that sees industry reaching across fence lines to support their corporate neighbors and residential communities. Here, the steel giant Arcelor

Mittal; the Port of Indiana, a transportation hub; Praxair, a supplier of industrial gases; NIPSCO, the local utility company; and Primary Energy, a company that recycles energy generated from industrial processes, have come together with the Wildlife Habitat Council, the Student Conservation Association and the Davey Institute to address canopy inequity issues in communities long impacted by industry. Supported through a mix of public and private funding, this initiative helps corporate employees and their NGO partners make a difference in a region once valued for its natural resources and now better known for its rust-belt status.

The CommuniTree effort is not about one company or one site. It's a regional approach to greening that seeks to reestablish some connectivity in a fragmented region and meet community goals for improved environmental outcomes. It requires innovation from participants planting in compacted soils or on berms, including a three-year care program needed to ensure the survival of urban trees. At one CommuniTree site at the Port of Indiana, the crew sunk a well in the area where the trees were being planted to allow easier access to water. With iTree analysis from Davey Institute, the effort is also being measured in terms of stormwater captured, pollutants abated, and carbon sequestered. In addition, iTree analysis shows that trees in this relatively unforested landscape realize greater value because of their scarcity.

Driving east from Chicago along I-94, the landscape that rolls north to the industrial lakeshore and to the south across residential neighborhoods is bereft of the canopy that more verdant areas enjoy. Here, at the intersection of city and industry, efforts like the CommuniTree initiative can reconnect remaining wildlife habitats and bring nature's benefit into the urban-industrial edge.

River Rouge

In addition to providing ecosystem services, nature-based efforts can leverage nature as an urban community asset. The city of River Rouge, MI offers an example; River Rouge is a challenged community by any definition. It sits on Detroit's southwest border, surrounded by heavy industry including Marathon Petroleum's refinery, DTE Energy's River Rouge coal-fired power plant, the Detroit Water and Sewer plant, and the infamous Zug Island, home to a massive US Steel facility supplying the auto-industry in Detroit and beyond. Most River Rouge residents are low-income families of color who live near industrial facilities in a

town with limited recreational space, even though River Rouge fronts both the Rouge and Detroit rivers.

DTE, an energy company that serves 2.2 million customers in southeast Michigan, operates a coal-fired generation station in River Rouge. The power plant is slated for closure in 2023, as a result of intense community pressure and DTE's plans to transition to a cleaner energy portfolio. Since the early 2000s, DTE employees have worked to mitigate the plant's impacts on the neighborhood, and have leveraged nature as one of the tools to do so.

The power plant sits on over 100 acres at the confluence of the Rouge and Detroit rivers, right next to one of the city's few parks. The banks of the river are 97% hardscaped, thanks to the development of heavy industry in the region since Detroit's ascendancy as a manufacturing powerhouse. DTE restored a section of its riverfront to create a natural shoreline with a native plant landscape design that provides habitat for pollinators and migratory birds. This restoration also works to create an extension of the local park, and inserts a nature-based buffer between park users and the plant.

With an eye to further and more-direct community benefit, employees at the plant restored a former hardscaped parking lot into a five acre meadow designed to become a haven for wildlife, an outdoor classroom, and a research plot for urban biodiversity. While little research has been done on the efficacy of grasslands and shrubs to remove pollutants from the air, one study found that these landscapes remove 6.5 million tons of air pollution in the U.S. annually. In addition, the meadow is being managed for conservation outcomes. Practices like reduced and delayed mowing allow grassland birds to complete their nesting seasons undisturbed, and avian nest boxes help compensate for the absence of natural nesting structures like snags and dead trees. Fragments of the site, not used for operations, are managed as pollinator habitat where Blue Wild Indigo, a host plant for the state endangered Karner Blue Butterfly, has been seen across a number of seasons.

The habitats and management regimes are all designed to make the meadow useful as an outdoor classroom for the community, while acting as an air purification tool. Youth service groups and school classes use the meadow to explore the wildflowers and grasses, the nesting structures, a

snake hibernaculum, and the wildlife found on site, both in the meadow and in a small pond. The site hosts Earth day and Arbor day events, has hosted Ph.D. students following urban coyotes and has inspired middle school teachers developing environmental education materials. In the absence of the nature centers and public parks found in more affluent communities, DTE's meadow shows that access to nature for education can be designed into an industrial setting.

Phillips66

There are many challenges to bringing nature into industrial places. Nature is rarely top of mind for business owners in urban places, but solutions can be designed to educate and incentivize. Phillips66, which owns thousands of gas stations in the U.S. and the U.K., overcame such challenges by educating gas station franchisees about the opportunities for pollinator plantings at gas stations and providing credits to franchisees that installed the plantings. The company developed a suite of regional planting guides with high production values, signaling a serious intent from corporate headquarters. The project recorded high satisfaction scores from franchisees, sales teams, employees, and interns. Awareness scores; how much an individual knew or cared about pollinators, increased also.

The best nature-based solutions on urban industrial lands are those that are part of a corporate citizenship or conservation strategy like DTE's or Phillips66. By integrating efforts such as tree plantings, restorations, or pollinator gardens into a larger strategy, companies begin to mainstream biodiversity into their operations. When they crosswalk the effort to other CSR goals like employee engagement, community relations, and/or workforce development, like the CommuniTree initiative, the projects become more resilient.

Air quality in urban residential communities near industrial facilities will not be improved by nature alone. But nature can contribute to the solution, and while doing so, bring benefits including recreation, education, and an increased sense of community pride. As one tool to combat disparate societal outcomes, nature is accessible, affordable and has few, if any, downsides.

COVID-19 and Inequity—Public Health Needs a Third Revolution

BECHARA CHOUCAIR

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For many Americans, George Floyd's murder ignited a new level of momentum to confront police violence against people of color. The COVID-19 pandemic—which is killing black Americans at nearly two and a half times the rate of whites—has put a spotlight on our nation's shameful racial divide in public health.

While the first and second public health revolutions vastly extended life expectancy by making strides against communicable disease (cholera, typhoid and dysentery) and chronic illness (heart disease and diabetes), racial gaps remain a persistent contributor to negative health outcomes.

In a nation with growing economic disparities, scarred by centuries of systemic racism, the third revolution in public health must address the root causes of our remaining pervasive health inequities—poverty, pollution, housing, food security and other basic needs. Also, because our systems have resulted in these issues disproportionately impacting communities of color, we need to conceive, develop and implement solutions that prioritize the wellbeing of people and communities that have been overlooked for far too long.

It's a daunting task, to be sure. But, with an approach I call precision community health, we can target our limited resources to be effective at addressing the most urgent public health inequities, while also supporting the eradication of racism throughout our society.

Investment is needed in public health systems, including state-of-the-art data collection and communications tools. With these we can collect granular data on everything from asthma rates to housing conditions and

police violence, broken down by race and income. That data can then be transformed into knowledge to guide decision-making.

We can leverage social media and other communications strategies to deliver precisely targeted messages to ensure people have information they need, when and where they need it, to make informed decisions for themselves and their loved ones.

We can also invest in people by creating a national Public Health Corps, similar to AmeriCorps. Recruitment could start with our country's community health workers, our invaluable set of frontline public health workers who are already trusted members of the communities we serve today.

But importantly, these workers' expertise and training can also build equity in communities today, by linking people to resources on housing, food security, employment and more.

Community health workers are also uniquely positioned to have an immediate impact on the spread of COVID-19 by performing the critical task of contact tracing—reaching out to those who test positive for COVID-19, helping them identify others they may have been exposed, then supporting them through quarantine and testing.

For any of our efforts to succeed, we must account for and honestly confront the distrust many people feel in our public institutions. In this time of massive societal upheaval, we have a tremendous opportunity to shift our focus and resources to fully embrace public health solutions. But our field will need to reckon with our own painful history of systemic racism to realize our full potential.

If we are to continue making the breakthroughs that improve and extend lives as public health has done for decades, we must embrace the moment we are in. It's time to rethink public health by understanding the inequities that are making people sick and targeting resources where they are needed most.

After COVID-19, NYC's Future Depends on Bold Moves

LARISA ORTIZ

Originally published July 24, 2020 in City Limits

As an urban planner and a lover of cities, I am desperate to be rosy about the future of my beloved city. But as an economist and strategist, I have to go where the facts lead. And for our cities—and specifically our central business districts—the news right now is potentially devastating.

When people say “cities come back, they always do,” or “pandemics have happened before and look, our cities remained,” they ignore a fundamental truth that distinguishes this moment from many others.

But before we get there, let's start with the fact that cities thrive when endowed with access to resources, markets and human capital. New York City, with its preeminent information-based economy, offers businesses an unmatched agglomeration of talent and knowledge. This is why, even despite our high cost of living and wages, Amazon chose New York (before pulling out) for one of two headquarters over other competitors.

So, while many urban theorists are doubling down on the future of cities, I just can't get there—not yet at least. What many miss in their arguments that “density does not correlate with the virus” (which is true) is that we cannot cherry pick the lessons of history. Cities don't always grow, and contraction and population loss is in fact a real threat that we must grapple with.

Others postulate that the pandemic is an opportunity to right-size the city with lower rents and lower housing costs. Also true, but this argument simultaneously misses the point that downsizing will send the city's budget into a nosedive and reduce our ability to invest and maintain high-quality services. Dramatic changes in the size of cities

and their growth trajectories do in fact happen. When they do it is often attributed to major historical events, one of which, I'm afraid, we are smack dab in the middle of.

Transportation technology, in particular, is a historic agent of change for many cities. Take the growth and later economic demise of Western New York, which can be attributed to the Erie Canal, later eclipsed by the railroads (a textbook case of creative destruction if there ever was one). Or the transformation of Denver and Atlanta into major cities as a result of access offered by international airports. New technology and transportation innovation, when taken together, are the one-two punch that create major disruption in urban growth patterns. And New York, whether we like it or not, is in a moment where we face the confluence of irresistible forces whose impact is still unknown.

By "forces" I mean the rapid and immediate growth in remote work, required by the pandemic but aided and abetted by video conferencing technology that has rendered a commute to the office or even a business trip, well, unnecessary. Simply put, technological advancements mean that knowledge travels, but people don't have to. This singular technological shift has the potential to disrupt the system upon which New York's economic growth rests.

You may say that this technology has existed for years, so what's the difference now? Businesses that would otherwise never have considered abandoning central business district office space have prevailed through a forced test case. Moreover, many firms have unexpectedly warmed to remote knowledge-sharing tools and found them to be, if not a perfect substitute for in-person working, a darn good one. From blue-chip firms like Morgan Stanley to new-economy businesses like Twitter, many CEOs are now reconsidering their need for premium office space, a decision that has a tremendous financial upside by shifting occupancy costs off of their ledgers and onto that of their employees. A powerful motivator, for certain.

The future remains unwritten. It is too soon to tell whether telework will remain a viable option for the white-collar employees who make up the bulk of daytime employees in our central business districts, even if it is not an option for essential workers and those in production, manufacturing and distribution.

Despite all of this, it is critically important to recognize that New York retains a competitive advantage, which is why I remain bullish on our future. Our city's sheer size and scale reflects over 300 years of accumulated investments in infrastructure and institutions that are frankly impossible to replicate anywhere else.

The pandemic has not diminished our human nature and desire to experience culture, learn, and explore. One look at the risks that people are taking to go parties or local bars dispels the myth that human nature has changed in any substantive way. We still crave human connections. And the great museums and cultural institutions that fuel our visitor economy—even if their current operational existence is at risk—will find an audience after this is over. Broadway, too, will come back, fueling the restaurant industry in and around Times Square, which feeds millions of annual visitors.

Our subway and regional commuter infrastructure is yet another competitive advantage. When we are no longer scared of proximity, or as people become more comfortable with the new normal of mask-wearing, these assets will continue to support our resiliency as a city. This means we must continue investments in vital infrastructure—including the infrastructure to support new micro-mobility transportation options—which will hold us in good stead as we recover from the pandemic.

Urban policy makers should not despair. This is the time to make bold moves as well as investments that will ensure that New York remains a destination of choice. These decisions will ensure we attract and retain the next generation of young, ambitious and bright people who want to start their careers and build their lives in this great city—not to mention those of all incomes for whom New York is already home. Investments in neighborhoods and quality of life for all (not to mention great broadband service!) as well as housing affordability, will be necessary to ensure that New York retains its competitive advantage.

While I'm concerned, I do believe that policies and investments matter in determining our outcomes. But we don't save this city by burying our heads in the sand. We save it by understanding the existential threats we are facing and coming together to face these challenges head on—as New Yorkers do so well.

Congress Must Act to Save Public Transit

CORINNE KISNER

Originally published August 3, 2020 in The Progressive

One of the most momentous but least well-known challenges facing U.S. cities in the age of COVID-19 is that public transit may be on the verge of collapse. Many of the nation's transit agencies are in an existential crisis. Transit fares and the local taxes that fund this essential service have fallen by up to 90% in major cities.

In addition, thousands of transit workers have fallen ill with the coronavirus as they keep cities moving and bring essential workers to their jobs. Cities cannot survive without transit, yet transit cannot survive without a significant federal cash infusion.

The American Public Transportation Association is urging Congress to include \$32 billion for transit relief in its second coronavirus relief bill. The Senate version failed to do so.

Transit agencies throughout the country have acted swiftly and smartly to respond to the pandemic, by adding service to hospitals and grocery stores. Agencies made their own hand sanitizer, retrofitted buses to protect drivers, scrubbed every inch of their vehicles and, most importantly, kept running as much as possible.

But transit systems are being forced to make painful decisions. For example, San Francisco has warned that up to 40 of its 68 bus lines could be permanently axed. Denver's Regional Transportation District has already reduced service by 40% and has warned that more cuts may be necessary. These cuts will devastate people who are already struggling to make ends meet, and an economy that is already in dire straits.

Millions of people, including 2.8 million essential workers, rely on transit every day. With service cuts, buses will become slower and overcrowded. People will spend more hours on them, with less space to socially distance on board. This will increase dangers for an already at-risk population.

Funding transit is not just about the riders, it's about the future of our country's economy. Transit connects people to employment. It enables cities to avoid paralyzing gridlock. It employs hundreds of thousands of people and supports even more jobs.

According to the advocacy group Transportation for America, “more than two thousand manufacturing facilities and companies, spread across 49 states, are tied directly to the manufacture or supply of new transit systems and repairs and upgrades to existing systems.”

In March, Congress passed the CARES Act, which included \$25 billion for transit agencies.

Airlines, which move only one-half as many people nationally as ride the bus and subway in New York City each day, received \$50 billion from CARES.

Further, the most-used transit systems received only enough support to keep operating for a limited time. For example, NYC's transit system, which serves 38% of all transit riders in the U.S., received 15% of the funding, just enough to stay solvent through the summer.

It's not just New York. Many more cities—Boston, Chicago, D.C., Los Angeles, Philadelphia, San Francisco, Seattle—barely have enough to make it to the end of the year. Transit urgently needs more funding to keep the wheels rolling, with much of it going to larger systems.

Congress must act quickly to address this pressing need. Our cities, our essential workers and our economy all rely on it.

Trump's Coronavirus Playbook is the Same One He Uses for Climate Change

DANIEL REICH

Originally published August 15, 2020 in Resilience

There is a consistent pattern to how President Trump addresses crises that happen on his watch:

First, **dismiss the threat**. In 2017, departing Obama administration officials briefed Trump's team on how to address a pandemic like the coronavirus. One Trump Cabinet official fell asleep and others questioned why they had to be there. By spring of 2018, the Trump administration had dismantled the team in charge of pandemic response and fired its leadership. This action was coupled with the administration's repeated calls to cut the budget for the Centers for Disease Control and Prevention (CDC) and other public health agencies.

Then, **claim the threat is a hoax and blame others**. By February 2020, the President denounced Democrats, describing concerns about the virus as "their new hoax" after the Russia investigation and then impeachment. "Now the Democrats are politicizing the coronavirus," he said.

When (or if) you finally do something, it is inadequate. The administration's failure to send out millions of needed test kits and protective gear for health care workers was, and continues to be, an inadequate response.

Next, **claim what you have done is perfect**. Once he belatedly acknowledged the threat, the President claimed that testing for the coronavirus is "going very smooth," that "anybody that needs a test can get one," and that the tests "perfect" and "beautiful." Of course, these are all claims that the administration's science experts had to disavow. Then, when confronted with the botched testing process, Trump said: "I don't take responsibility at all."

And finally, **leave a trail of avoidable devastation behind.** The president's "leadership" resulted in the waste of precious time and the predictable trail of disease and death. The Administration's top scientists recently estimated that the coronavirus will kill between 100,000 and 240,000 Americans ... and we are just getting started.

Trump's response to the climate crisis is exactly the same:

First, **Trump dismissed climate change as a hoax** invented by the Chinese. "The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive," he wrote on Twitter in 2012.

Trump's response was, and is, inadequate. Trump pulled the U.S. out of the Paris climate accord; now he is actually rolling back regulations intended to reduce greenhouse gases (GHGs) associated with the changing climate. On March 31, 2020, the Trump Administration relaxed Obama-era fuel efficiency standards, allowing cars on American roads to emit nearly one billion tons more carbon dioxide over their lifetimes.

In addition to regulatory rollbacks that intensify the crisis, the Trump Administration has created a hostile environment for any employee that warns about climate change. Under Trump, the EPA has eliminated references to the changing climate on its official websites. The administration has also fired respected scientists from government panels intended to address climate change and proposed devastating cuts to any part of the budget related to climate change.

Then, when the inevitable weather-related disasters arrive, **the President denies there's a problem, blames others, and insists that what he does is perfect.** For example, after Hurricane Maria slammed Puerto Rico in 2017, an independent study found that 2,975 people died both directly and indirectly from the storm. President Trump took to Twitter to argue, without evidence, that "3,000 people did not die" and that the numbers were made up by his political opponents to make him look bad (a hoax by another name is still a hoax). The President then insisted that the government's response to Hurricane Maria was an "unsung success."

Here, too, **avoidable devastation is the result.** Trump's failure to act on climate means we can expect increasingly damaging hurricanes, wildfires

and heat waves, along with declining crop yields, destroyed infrastructure, and incalculable human suffering. According to the National Climate Assessment, by the end of the century, climate change could cost the United States \$500 billion per year.

There is one major distinction between the coronavirus and climate change. The coronavirus may, in time, level off, after a record number of deaths and a body blow to our economy. But the effects of climate change are not reversible. As we ignore the problem and fail to prepare for it, the consequences will only get worse. That is something to consider as we (hopefully) head for the polls in November.

COVID-19 Recovery Spending Could Catalyze Transformative Change, but Time Is Running Out

CASSANDRA BREEZE CEBALLOS AND ELIZABETH SAWIN

Originally published December 18, 2020 in The Hill

Imagine it's 2050 and the world is well on its way to meeting the goals set out in the Paris Climate Agreement. Use of coal, oil, and gas has fallen drastically. Energy and materials are used efficiently. Public transportation thrives; the world's cities are green, dense, and walkable. Because this green boom was designed by diverse stakeholders with environmental justice in mind, it has created more equitable societies around the world. Everyone agrees, these huge shifts began in the early 2020s with the economic recovery from COVID-19.

That's a thought experiment, of course, but it could be a reality. A recent paper in the journal *Science* calculated that if 10 percent of the \$12 trillion already committed to economic recovery were invested in clean energy and energy efficiency, the world could be on a path to meeting the goals of the Paris Climate Agreement. Instead of the modest rate of decarbonization that is currently underway, investments could steer economies strongly away from fossil fuels.

Properly designed, that turn away from fossil fuels could also improve racial, gender, and economic equity. For instance, researchers argue that energy efficiency assistance to African Americans can improve health and provide an equitable solution to energy insecurity. In Portland, Ore., a tree planting program led to a decrease in violent crime; researchers found the effect was greatest in low-income neighborhoods. Tree planting is an efficiency measure that reduces energy needed for cooling and has been shown to improve mental health and community trust. A solar-powered drip irrigation project in Benin improved crop production, income level, and food security for women farmers.

These examples show that, nationally and globally, a COVID-19 recovery could advance climate and equity goals. Unfortunately, this opportunity is not being grasped to its full potential. According to the Energy Policy Tracker, less than half of global recovery investments in the energy sector are green. Analysis by the Rhodium Group shows that nearly a fifth of the European Union's recovery spending could be considered green, but most countries have made far weaker commitments. So far, India, China and the U.S. are all directing less than 3 percent of their planned recovery spending in a "green" direction.

While green investments and policies can increase equity, it is hard to say if the green elements of recovery plans put forth so far will be equitable.

The most comprehensive database of stimulus spending, maintained by the IMF, shows little standardization or consistency on equity provisions. When equity considerations do figure into a country's stimulus package, they rarely apply to green investment. The handful of national plans that integrate equity considerations and green investments are vague and difficult to quantify. Some countries' COVID-19 stimulus packages refer to a "just transition," but fail to specify how funds will be spent in an equitable way.

In other words, not much of the world's planned recovery spending protects the future climate. Of the small fraction that will be green, not much is explicitly designed to be equitable.

There are some exceptions, though, and this is good news. Around the world, bright spots show the potential for COVID-19 funds to fight climate change while simultaneously increasing equity.

For example:

- Nigeria's Rural Electrification Agency is partnering with the African Development Bank and World Bank to fund the installation of residential solar systems in areas currently without electricity, as well as mini-grids for medical and health centers.
- Canada's COVID-19 plan focuses on protecting and uplifting disproportionately impacted communities, including seniors,

low-income families, Indigenous people, differently-abled individuals, and victims of gender-based violence.

- In Ethiopia, a four-year project focused on nature-based solutions to promote water security and community resilience emphasizes equitable development for vulnerable populations, especially women and girls.
- Colombia's COVID-19 stimulus plan, "Compromiso por el Futuro de Colombia," is organized around five pillars that emphasize the creation of a more sustainable and equitable future for the country.

These isolated examples represent possibility. But how can that possibility be realized on a larger scale?

On the climate side it is fairly straightforward. From big renewable infrastructure projects to weatherization of the smallest dwellings, recovery dollars should be poured into the clean energy economy. Public transportation, faltering as riders opt for other modes of transport during the pandemic, provides another opportunity for massive investments that can spur recovery, provide good jobs, and keep cities moving. And avoid investment in infrastructure for extracting and burning fossil fuels.

To seize the equity opportunity, decision makers must recognize that equity never improves by accident. Green investments produce improved equity only with intentional planning, which can take many forms.

For example:

- Designing policy to target marginalized populations, such as Afghanistan's renewable energy project aimed at increasing energy security and employment opportunities in rural areas;
- Ensuring community input, buy-in, and benefit, as with Ethiopia's tree-planting initiative, which will "support communities to look after the trees to maturity, and to manage them for their own benefit;"

- Cross-sectoral collaboration, such as Ireland's July Jobs Stimulus, which brings together multiple public agencies, private businesses, and community organizations;
- Comprehensive stimulus packages to meet the dual goals of environmental protection and justice, like Singapore's goal for an overall sustainable economy with greater emphasis on social safety nets designed by diverse Singaporean voices.

If enough money is injected into an economy, recovery will happen. But struggling communities around the world are calling for more than recovery. They are calling for a transformation that includes justice and decisive climate action. Visionary leaders, like those behind the projects we've described above, are showing that a transformative recovery is possible. But it won't happen by accident and it won't happen with the plans currently on the books. There's still time for a transformative recovery, but there's less of it every day.

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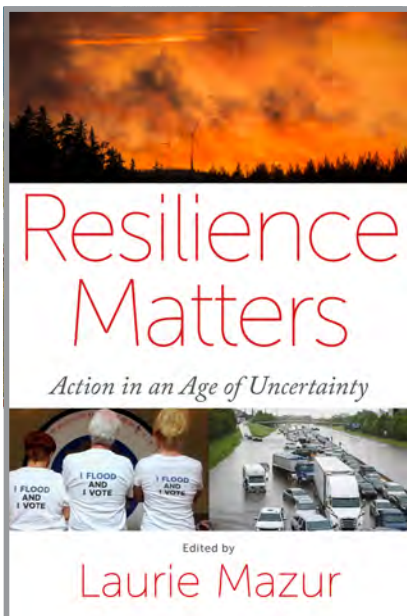
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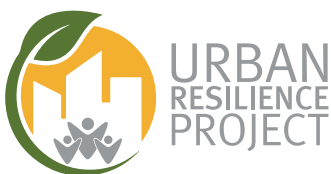
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Resilience Matters

Action in an Age of Uncertainty

The year 2019 may be remembered as the year when climate change got real. It was a year that saw the hottest month in human history (July), and one that capped the warmest decade on record. By mid-year, the U.S. had seen its wettest 12-month period in history. At year's end, heat and drought fueled apocalyptic brushfires across Australia.

But if climate change got real in 2019, climate resilience got realer. The Trump Administration may have abdicated its responsibility to head off climate chaos, but so many others—mayors, activists, scientists, ordinary people—stepped into the breach. At the Island Press Urban Resilience Project, we have the great privilege of helping those climate leaders tell their stories.

Those stories and solutions have now been collected in a new e-book that can be downloaded for free at islandpress.org/rm-download

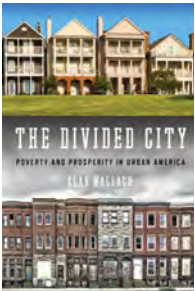


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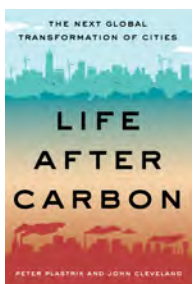
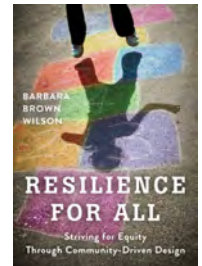
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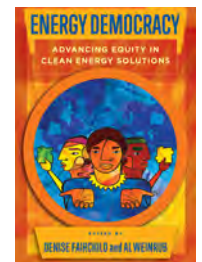
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