

FARTHER, FASTER, TOGETHER

**How Arts and Culture Can Accelerate
Environmental Progress**



About ArtPlace America

ArtPlace America (ArtPlace) is a ten-year collaboration among a number of foundations, federal agencies, and financial institutions that works to position arts and culture as a core sector of comprehensive community planning and development in order to help strengthen the social, physical, and economic fabric of communities.

ArtPlace focuses its work on creative placemaking, which describes projects in which art plays an intentional and integrated role in place-based community planning and development. This brings artists, arts organizations, and artistic activity into the suite of placemaking strategies pioneered by Jane Jacobs and her colleagues, who believed that community development must be locally informed, human-centric, and holistic.

About Helicon

Helicon works to help people across sectors engage the catalytic potential of artists and culture to drive social change and make communities more vital, sustainable and just. Our focus is on advancing creativity, equity, and environmental sustainability as inseparable dimensions of the future we want and what will help us get there. A just and sustainable future requires creativity—to imagine and implement solutions to the complex challenges we face today. Cultural equity—ensuring people from all walks of life have the opportunity to express themselves creatively and sustain their culture—is an essential to a just and democratic society. And we all have a stake in ensuring the integrity and health of our ecosystem.

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Cover image: In a celebration of the Duwamish River's First Peoples, Raven, Willapa, and Haynisisoos canoe families from around the region paddled in to the Revealing Coast Salish Cultures festival at the Duwamish Longhouse.
Location: Seattle, WA. Photo by Robert Zverina.

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ArtPlace America is a ten-year collaboration of 16 foundations, 8 federal agencies, and 6 banks that is working to reposition arts and culture as a core sector of community planning and development in order to help strengthen the social, physical, and economic fabrics of communities.

ArtPlace focuses its work on “creative placemaking,” which describes projects in which art plays an intentional and integrated role in place-based community planning and development. The “creative” simply invites artists and arts organizations to join their neighbors as collaborators into the suite of placemaking strategies pioneered by Jane Jacobs and her colleagues, who believed that community development must be locally informed, human-centric, and holistic.

In looking at who does community planning and development in America’s communities, we have found that our colleagues may generally be organized into ten sectors:

Agriculture & Food
Economic Development
Education & Youth
Environment & Energy
Health
Housing
Immigration
Public Safety
Transportation
Workforce Development

As a core part of our research agenda, we are taking each of these sectors, one at a time, and exploring how arts and cultural practitioners have been and might be partners in helping to achieve their goals. The document that follows is the fourth “field scan” that ArtPlace America has commissioned in this series.

The field scan is an exploratory first step that aims to surface:

- Key goals or needs in the environmental sector that arts and culture might address
- A typology or framework for understanding the ways that arts and culture has and might partner with the environmental sector
- Barriers to integrating arts and culture within the environmental sector
- Strategies or tactics to advance collaborations with arts and culture in the environmental sector

Each field scan serves as a framing document for a working group tasked with taking the analysis and findings one step further, helping ArtPlace to identify the best practices that warrant formal case studies, key methods for evaluating success, and strategic framing of the material in a way that resonates with those most likely to take up creative placemaking practice in other sectors. The field scans are not an end product in and of themselves, but rather an initial inquiry that provides a foundation for future work.

Each field scan addresses two primary audiences: artists and other arts and cultural practitioners seeking to better understand and collaborate with a particular community development sector; and community development practitioners who are interested in how arts and culture might further their work.

Our goal is ultimately for these two audiences to develop a shared language and a set of goals, so that communities across the country will benefit from these powerful, cross-sector synergies.

Jamie Hand, Director of Research Strategies
ArtPlace America

“The arts help people realize ‘I can’ – they are an antidote for disempowerment.”

— Frances Lucerna, Artistic Director, El Puente

INTRODUCTION AND METHODOLOGY



Photo Credit: The Fargo Project, City of Fargo

The goal of this field scan is to understand and frame how place-based arts and cultural interventions, or “creative placemaking,” can advance sustainability outcomes in the context of community development. We focused on the U.S. context, although many of the issues and priorities identified are also globally relevant.

The research process involved the following specific components:

1. A literature review of 522 academic and non-academic sources;
2. Identification and analysis of 103 art and culture projects across the United States that are addressing environmental issues
3. In-depth interviews (37) with practitioners in the environmental sector and artists and cultural leaders working for environmental outcomes. Interviewees included representatives of major environmental organizations, grassroots environmental justice entities, policy experts, funders, cultural organizations and artists (listed in Appendix A). All quotes are from these interviews unless otherwise cited;
4. A working group of 26 people, convened in partnership with Grist and the Sierra Club, to review and refine the findings and identify

concrete next steps to move this work forward (participants and summary of outcomes in Appendix B); and

5. Ongoing conversations with ArtPlace staff and sector leaders about emerging findings and next steps.

Defining the Sector

Bounding the environmental sector for the purpose of this scan was a necessary but challenging task. Environmental issues intersect with a wide range of domains – food and agriculture, transportation, toxics, natural resources, energy, consumer goods, and more. Based on a literature review and consultation with field leaders, we chose to focus on six primary issues—energy, water, land, waste, toxic pollution, and climate resilience and adaptation. Then, based on research and further interviews, we identified a set of five priorities that are considered by leaders across these areas to be critical leverage points for environmental sustainability. We found that environmental leaders need help sparking public demand, building community capacity and agency, bridging scales, enriching and activating the built environment, and nurturing sustainable economies.

We then looked at creative placemaking projects that were aligned with the environmental sector's priorities and are showing signs of success. We sought to understand what they were doing and why their strategies were working. The nine case studies in Section 9 reflect this analysis. Although the examples we highlight are local and specific, together they form a body of evidence which we can use to infer more general conclusions about what works, to do what, and in what contexts. This knowledge can be applied by other communities facing similar issues.

The Opportunity

There is impressive work already happening at the intersection of culture and the environment, and there is substantial potential for greater impact. Our research revealed an environmental sector open to and searching for new ideas, partners, methods and tools to help it achieve address immediate environmental challenges and larger existential threats. On the arts side, we found a committed field of creative practitioners working on environmental issues, many of whom are achieving important outcomes, including outcomes that have been elusive for the environmental sector. In this scan we offer a preliminary framework for understanding how the arts can help address priority challenges in the environmental sector, and examples of how this is already working in places across the country.

Structure of the Report

Chapter 2 takes the pulse of where the environmental sector is today, and describes how the magnitude of our current environmental challenges have created an openness to new ideas. Chapter 3 proposes why culture matters for sustainability. Chapter 4 is the bulk of the analysis, with five critical priorities for sustainability that arts and culture strategies are helping to advance and examples of what is working. Chapter 5 provides another way into the analysis for environmental sector practitioners who are focused on one of six specific issues we reviewed and want to see how creative placemaking can address their needs through that lens. Chapter 6 offers a brief note on the challenges of measurement and assessment with this integrated work, and for sustainability more generally. Chapter 7 concludes the analysis and offers some next steps. Chapter 8 shares detailed case studies of compelling projects that are achieving the outcomes identified in this report. The interviewees and working group participants are included in appendices.

About the Team

This field scan was conducted by Helicon Collaborative. Alexis Frasz directed the research and was the lead writer, with conceptual and editorial advice from Holly Sidford. Marcus Renner conducted extensive research and provided insights throughout the process. Jamie Hand and Danya Sherman from ArtPlace guided the project and contributed important feedback throughout. All interviewees and working group members (also interviewed) provided critical insights and perspectives that shaped this analysis, and we are extremely grateful for their generosity. We also drew from other, not-yet-published Helicon research, supported by the Surdna Foundation, on the role of culture in supporting grassroots environmental action.

**“...if there has ever
been a moment to
advance a plan to
heal the planet
that also heals our
broken economies
and our shattered
communities, this
is it.”**

— Naomi Klein, *This Changes Everything*

A SECTOR IN FLUX: BIG CHALLENGES REQUIRE NEW THINKING

Big Challenges

The environmental challenges facing our communities today are urgent and complex—climate change, pollution, and habitat degradation first among them. There have been some big wins like the global Paris Agreement on climate change in 2015 and the Clean Power Plan signed by President Obama in 2016. However, environmental activists, scientists and policy experts believe we must accelerate the pace and scale of change to ensure a healthy and livable future.¹

There is broad agreement in the environmental sector about what we need to do—transition to clean energy, remediate pollution, restore habitats, and protect communities from the impacts of climate change. However, how we get from where we are to where we need to go is not so obvious. Most of the changes we need are not simple techno-fixes, but large-scale overhauls to whole systems such as transportation, agriculture, building design, consumer goods, or changes to social behaviors and economic structures. The magnitude, scope and speed of the changes we need to make—and the consequences for not doing so—require tapping the resources, skills and ingenuity of multiple sectors simultaneously.

Leading Edge: The Move Towards Whole-Systems Thinking

The “environmental sector” as we have defined it for this review (energy, water, land management, climate adaptation and resilience, pollution, and waste) includes a range of professional domains

that deal with our relationship with the natural environment. Each of these domains has their own experts, practices and structures for advocacy, policy, management, and planning. However, from an ecological perspective (both natural and human) these domains are inextricably interrelated and interdependent.

Leading ecologists and activists argue that this siloed approach to our environmental issues is a hindrance to sustainability, because it results in piecemeal responses to challenges that are actually interdependent. For example, half of the water usage in the U.S. goes to the process of cooling power plants, which produce a variety of water-polluting byproducts,² but water and energy issues are typically managed and regulated separately. Growing numbers of field leaders are advocating for more holistic approaches that address the root causes of environmental problems and devise interventions that will have effects at the systems level. Climate change, which demands this kind of systems-thinking and cross-discipline collaboration, has helped to catalyze this movement.

Mutually Reinforcing Problems:

Environmental Harm and Economic Inequality

In seeking root causes and systemic solutions, the sector is beginning to understand the degree to which our environmental issues are intertwined with socio-economic factors. Low-income communities and communities of color are impacted more severely by all kinds of environmental issues. They

¹ The bulk of the research for this paper was conducted over the course of 2016 and early 2017, during which time a new U.S. President entered office. Since then, President Trump has radically changed course on environmental policy at the federal level, calling for exiting the Paris Agreement, reviewing the Clean Power Plan, and reducing the enforcement power of the Environmental Protection Agency. It is beyond the scope of this review to predict the environmental impact of these actions. Many will undoubtedly hinder progress, however many cities, states, corporations, and citizen groups are continuing to take decisive action toward greater sustainability.

² United States Geological Survey, “Summary of Estimated Water Usage in the United States 2010” (U.S. Department of the Interior, 2014). <https://pubs.usgs.gov/fs/2014/3109/pdf/fs2014-3109.pdf>.

are more likely to have toxic industries sited in their neighborhoods and are more vulnerable to the effects of climate change—in part because they lack the political and economic power to resist or move.³ The environmental justice (EJ) movement originated in the 1970s to resist these prejudicial policies and practices, but increasingly the broader environmental sector is recognizing the role that socio-economic inequality plays in how environmental harms are distributed. In 2016, the then-director of the U.S. Environmental Protection Agency (EPA), Gina McCarthy, called poverty and economic inequality the biggest *environmental* issue facing communities.⁴

The sector is also beginning to understand the extent to which our environmental problems, including the disproportionate impacts on poorer communities, are in fact the logical and unavoidable consequence of our economic system itself. Naomi Klein, journalist and author of *This Changes Everything: Capitalism vs. The Climate*, argues that a global economic model predicated on unlimited growth and consumption and driven by fossil fuels *requires* places and people that can be exploited—so-called “sacrifice zones”—in order to function.⁵ John Fullerton, former JP Morgan Vice President and founder of the Capital Institute, calls climate change a “symptom of a deeply flawed economic ideology” that privileges growth and profit over nature and human life and requires unequal distribution of resources to function.⁶ These thinkers and many others argue that we can’t solve our most pressing environmental problems without simultaneously challenging our economic model.

The Silver Lining

Many in the environmental sector actually see the imperative of climate change as an opportunity, albeit a scary one, to reinvent our socio-economic system so that it is more aligned with natural limits, human needs, and equity. Klein argues, “Climate change pits what the planet needs to maintain stability against what our economic model needs to sustain itself. But since that economic model is failing the vast majority of the people on the planet on multiple fronts that might not be such a bad thing... if there has ever been a moment to advance a plan to heal the planet that also heals our broken economies and our shattered communities, this is it.”⁷ Increasing number of policy researchers, nonprofits, and philanthropic entities are focused on accelerating a “just transition” to a new and more sustainable socio-economic system.⁸ Leaders in this movement include the Democracy Collaborative, Natural Capital Solutions, the New Economy Coalition, the Business Alliance for Local Living Economies (BALLE), the Ellen MacArthur Foundation, Movement Generation, and Green for All.

³ United Church of Christ Commission for Racial Justice, *Toxic Wastes and Race in the United States*, (1987), http://d3n8a8pro7vnm.cloudfront.net/unitedchurchofchrist/legacy_url/13567/toxwrace87.pdf?1418439935 And Denise Fairchild, “We Can’t Have Resilience Without Justice,” *Grist.org*, January 27, 2015, <http://grist.org/politics/we-cant-have-resilience-without-justice/>.

⁴ Clark Wilson interview.

⁵ Naomi Klein, *This Changes Everything: Capitalism vs. the Climate* (New York: Simon & Schuster, 2014), 310.

⁶ John Fullerton, *Regenerative Capitalism: How Universal Principles And Patterns Will Shape Our New Economy* (The Capital Institute, April 2015), <http://capitalinstitute.org/wp-content/uploads/2015/04/2015-Regenerative-Capitalism-4-20-15-final.pdf>

⁷ Klein, Naomi. *This Changes Everything*. (155).

⁸ Labor Network for Sustainability and the Grassroots Policy Project, “Just Transition” – Just What Is It? (Labor Network for Sustainability: 2016) <http://www.labor4sustainability.org/uncategorized/just-transition-just-what-is-it/>.

“...we cannot recognize the environmental problems created by our way of life, nor can we develop solutions to address them, without first facing and changing the beliefs and values that have led to them.”

— Andrew J. Hoffman, *How Culture Shapes the Climate Change Debate*

CULTURAL CHANGE PRECEDES POLITICAL CHANGE

Why Culture?⁹

What does culture have to do with sustainability? It turns out, quite a lot.

First, how we interact with our environment and the way we build our communities is rooted in and shaped by our culture—our habits of consumption, our ideas about nature, how our communities function, what we value as meaningful, what we think is possible or impossible. Many environmental leaders argue that to create a more sustainable world, we have to address the culture that perpetuates our environmentally harmful ways of living. Andrew Hoffman, Director of the Institute for Global Sustainable Enterprise at the University of Michigan, puts it this way, “While technological and economic activity may be the direct cause of our environmental problems, our individual beliefs, culture norms, and societal institutions guide that activity. It follows that we cannot recognize the environmental problems created by our way of life, nor can we develop solutions to address them, without first facing and changing the beliefs and values that have led to them.”¹⁰

Arts and cultural expressions and practices are a tangible vehicle through which individuals and communities form culture in the anthropological sense—beliefs, identities, worldviews, and values. It is through culture that we interpret and make meaning from our experiences, including traumatic ones. It is often through culture that we most profoundly and empathetically connect with other people, both those like us and those who are

unfamiliar. Cultural practices help build the social connections that make communities vibrant and resilient, and can help with catharsis and healing. Arts and culture reflect and reinforce existing social norms, but can also shine a light on problems and unsettle the *status quo*, providing new ways of seeing or being in the world and easing the process of change. Critically, it is through cultural vehicles that new, more sustainable values and ways of living will be disseminated and sustained.

The idea that culture is both “agent of change and the object of change”—political, social, economic, and spiritual—is gaining broader acceptance among social change activists and movement leaders.¹¹ Community activists have long used culture to organize and mobilize. Social change movements from the Civil Rights Movement to Marriage Equality have used cultural strategies to change cultural norms, working both through and on culture. The influential Breitbart News site operates from founder Andrew Breitbart’s belief that “politics is downstream from culture,” and it has assiduously worked on shaping cultural values and identities.¹² The arts are often targets for totalitarian governments precisely because of their power to affect people deeply and help them imagine different futures. The environmental sector is just beginning to explore cultural strategies for its work, and our research and others’ work suggests the potential for impact is significant.

⁹ The work of The Culture Group informed this section, especially *Making Waves: A Guide to Cultural Strategy* (2014), <http://revolutionsperminute.net/wp-content/uploads/2015/05/Making-Waves-The-Culture-Group.pdf>.

¹⁰ Andrew J. Hoffman. *How Culture Shapes the Climate Change Debate* (Stanford: Stanford University Press, 2015), 15.

¹¹ The Culture Group, *Making Waves*, 6.

¹² Lawrence Meyers, “Politics Really is Downstream from Culture,” *Breitbart.com*, August 22, 2011, <http://www.breitbart.com/big-hollywood/2011/08/22/politics-really-is-downstream-from-culture/>.

Definition of Art and Culture for this Scan

For this research we looked at arts and cultural interventions that are rooted in place and connected to community development goals. ArtPlace and others call such initiatives “creative placemaking.” Although the term “creative placemaking” is relatively new,¹³ there is a long history of artists working to improve communities and/or create social change. As a field, creative placemaking now seeks to further enhance and extend understanding of the roles that culture and artists can play in advancing other sectors’ work, thus becoming valued, consistent and fully-integrated parts of community planning and development.

Creative placemaking often involves the same visual, performing, literary, and media arts modalities that one finds presented by arts institutions, but its tools go beyond fine arts forms or institutional contexts. Artists doing this community centered work may also utilize theater games, storytelling, interventions in public spaces, culinary and craft traditions, spiritual rituals, community creative practices, culture-based community organizing, and other approaches. Artists often work in close partnership with community members or non-arts sectors, and the “artwork” may include conversations, relationships, or outcomes that result from this relational, collaborative process. Sometimes the process itself is the creative product.

Doing community-based work requires additional skills, beyond an artist’s aesthetic ones. These may include: facilitating group discussions, organizing, conflict resolution, and consensus building. An increasing number of artists consider making positive change in communities a part of their practice, whether they call it creative placemaking, civic practice, social practice, community-based art, or something else entirely.

¹³ Ann Markuson and Anne Gadwa, *Creative Placemaking* (Markusen Economic Research Services and Metris Arts Consulting, 2010), <https://www.arts.gov/sites/default/files/CreativePlacemaking-Paper.pdf>.

The Ethics of Creative Placemaking

Creative placemaking is a kind of artistic practice that engages directly with and in geographically defined communities to make change. With regard to environmentally-oriented creative placemaking, creative practitioners are often working with communities that are experiencing severe social and economic challenges, or have legacies of trauma and disinvestment. This makes it especially critical to ensure that cultural interventions “do no harm,” even unintentionally.

The ethics vary depending on project parameters and the community involved, but basic guidelines for this work include being aware of potential power dynamics, ensuring trauma is responsibly and safely addressed when uncovered, equitably recognizing and compensating community members for their contributions, and building the capacity of the community to sustain the changes over time. For funders and environmental sector leaders, it is important to seek out and support artists and cultural forms that speak to, and preferably are from, the community of concern. The nonprofit arts and culture sector has its own legacy of inequitable distribution of resources and opportunity that mirrors issues in the environmental sector and society at large. Successful creative placemaking efforts are those that do not further disadvantage or harm people living in rural places, people of lower or moderate incomes, and people of color, who have historically had the least access to resources and power.

There is an active conversation going on in the cultural sector now about cultural equity¹⁴ and ethical community-based practice,¹⁵ which parallels a similar conversation in the environmental sector

¹⁴ Holly Sidford and Alexis Frasz, *Not Just Money: Equity Issues in Cultural Philanthropy* (Helicon Collaborative, 2017), http://notjustmoney.us/docs/NotJustMoney_Full_Report_July2017.pdf.

¹⁵ Alexis Frasz and Holly Sidford, *Mapping the Landscape of Socially Engaged Artistic Practice* (Helicon Collaborative, 2017). http://artmakingchange.org/wp-content/uploads/2017/09/Mapping_the_Landscape_of_Socially_Engaged_Artistic_Practice_Sept2017.pdf

about equity for and responsible development in and with lower-income communities and communities of color.¹⁶ These conversations can inform each other and ensure environmentally directed cultural strategies are both effective and equitable.

¹⁶ Sarah. Hansen, *Cultivating the Grassroots: A Winning Approach for Environment and Climate Funders* (National Committee on Responsive Philanthropy, 2012), https://www.ncrp.org/wp-content/uploads/2016/11/Cultivating_the_grassroots_final_lowres.pdf.

**“The arts are
particularly great
at connecting with
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of the most effective
ways of engaging us
emotionally.”**

— Anthony Leiserowitz, Director, Yale Project on Climate Change Communication,
Yale School of Forestry and Environmental Studies

HOW ARTS AND CULTURE CAN ACCELERATE ENVIRONMENTAL PROGRESS

Our literature review and interviews with environmental leaders revealed five priorities that most agree are essential for sustainability. Progress in these five areas can meaningfully move the needle towards environmental sustainability outcomes in communities of all kinds, and for our world overall.

However, environmental leaders are finding themselves at the limits of progress using the sector's traditional tools and methods, and are seeking new approaches. Arts and cultural strategies have potential to radically amplify and accelerate environmental progress in each of these five areas:

- 1. Spark Public Demand.** Art and culture can help by making environmental issues personal, emotional and salient; and by showing people what sustainability can actually look and feel like.
- 2. Build Community Capacity and Agency.** Art and culture can help by building community cohesion, identity, power and leadership; and by creating inclusive processes for dialogue and co-creation.
- 3. Bridge Scales.** Art and culture can help by connecting local experiences with larger contexts; and by helping people find common ground across political, geographical, and ideological boundaries.
- 4. Enrich and Activate the Built Environment.** Art and culture can help by creating infrastructure that meets people's social, aesthetic, and spiritual needs; and by designing physical spaces that cue and reinforce new and more sustainable thinking and behavior.
- 5. Nurture Sustainable Economies.** Art and culture can help by generating, revealing, or redefining value; and by helping drive more sustainable local economies.



Local kids chalk 6ft sea level rise line for HighWaterLine, Biscayne Blvd, Miami, FL. Photo credit: Jayme Gershen

Priority 1: Spark Public Demand

Public demand sets social norms and drives business and political actions, and the lack of strong public demand for change is one of the most significant barriers to environmental progress. People in the U.S. tend to view climate change as non-urgent relative to other concerns, such as health care and taxes.¹⁷ But public pressure has contributed to environmental wins such as the ban on fracking in New York State in 2014¹⁸ and Florida voters' rejection of

restrictions on rooftop solar in 2016.¹⁹ In California, strong grassroots mobilization drove the state's strict carbon pollution standards.²⁰

Overall, the environmental sector has struggled to activate public demand for sustainability. Cognitive science tells us that people are motivated by things that feel emotionally resonant and personally salient,²¹ but environmental issues like energy or water policy often seem abstract and distant to everyday life (especially when they are presented in technical or policy language). In addition, when problems seem too big or seem hopeless, as is often

¹⁷ Pew Research Center, "Thirteen Years of the Public's Top Priorities," January 7, 2014, <http://www.people-press.org/interactive/top-priorities/>.

¹⁸ Lucia Graves, "On the faultline: New York fracking ban leaves state divided as primary looms," *The Guardian*, April 16, 2016, <https://www.theguardian.com/environment/2016/apr/16/fracking-new-york-primary-bernie-sanders-hillary-clinton-donald-trump>

¹⁹ Heather Smith, "Florida protects solar: 5 lessons to learn from a major green energy win," *Salon*, December 6, 2016, <http://www.salon.com/2016/12/06/lessons-to-learn-from-floridas-vote-to-defend-rooftop-solar-power-partner/>.

²⁰ Union of Concerned Scientists, "AB 32: California Global Warming Solutions Act of 2006," <https://www.ucsusa.org/global-warming/solutions/reduce-emissions/california-ab32.html>.

²¹ Sander van der Linden, Edward Maibach, and Anthony Leiserowitz, "Improving Public Engagement with Climate Change," *Psychology Today*, November 20, 2015, <https://www.psychologytoday.com/blog/sound-science-sound-policy/201511/improving-public-engagement-climate-change>.

the case with climate change, people can become paralyzed and avoidant.

The environmental sector is looking for ways to make issues feel immediate, salient and personal. Partly, this means making people aware of sustainable alternatives, so that change feels possible and they can see their agency in making it happen.²² Jodie Van Horn, Director of the Sierra Club's Ready for 100 campaign explains that, in her view, "The biggest challenge in building support for 100% renewable energy is that people don't know what it looks like. We need to create a cultural conversation about clean energy, not just a scientific one. We know that sweeping policy change will only follow an on-the-ground shift in public expectations. We can't just *tell* people wind and solar are better, and do economic impact studies about how they create jobs. People cannot imagine it unless it is visible. People need to *see* and *feel* it—how does my daily life change? How does my street feel different without cars?"

Art and culture can help by:

Making environmental issues personal, emotional and salient

Through stories, metaphor, imagery, and physical experiences, arts and culture can evoke emotions and make abstract issues—such as climate change—become real and personal. For example, Ashland, MA is the site of the Nyanza Chemical and Dye Company plant, which was shut down in the 1970s and later designated a Superfund site. Although the site was supposedly remediated to safe levels, residents continue to suffer from unusually high rates of rare cancers. In 2014, local artist Dan Borelli changed the colors of the town's streetlights to reflect the colors and concentrations of dye still

present in the groundwater in various parts of town based on an analysis of EPA data. He guided group walks around the town so that residents could see exactly where the dye was still present in their water. This brought the issue out of the shadows, helping people see themselves as united in a shared struggle. As a result of this experience, a group of residents is now fighting for further cleanup and safe siting of housing. Borelli says, "Information alone won't move people. Intervening in public space is a forceful statement. Data on a website is easy to ignore, but when people experience something viscerally in their built environment it changes them."

Social scientists agree. Anthony Leiserowitz, Director of the Yale Project on Climate Change Communication at the Yale School of Forestry and Environmental Studies, advocates for using the arts for climate-related communications because they are "*particularly great* at connecting with the deeper parts of ourselves and [are] one of the most effective ways of engaging us emotionally."²³ Behavioral science confirms that engaging people experientially and emotionally is the precursor to changing perspectives and motivating action. Policy papers and data have their place in environmental communication, but they do not reach and influence people in the way that stories, images, and experiences can.

Showing people what sustainability can actually look and feel like

Art can also help visualize and prototype what a sustainable future could look and feel like, so that people believe change is possible and want to move towards it. *The Land Art Generator Initiative (LAGI)*, for example, shows people how renewable energy generators can also be beautiful sculptures, thus combatting a common perception that renewable

²² Kharunya Paramaguru, "The Battle Over Global Warming Is All In Your Head," *Time*, August 19, 2013, <http://science.time.com/2013/08/19/in-denial-about-the-climate-the-psychological-battle-over-global-warming/>

²³ Alexis Frasz, "Can Art Change How We Think about Climate Change?," *GIA Reader*, Fall 2016, <http://www.giarts.org/article/can-art-change-how-we-think-about-climate-change>

energy structures are eyesores or unsuited for urban environments. There is a high demand for LAGI's work from communities around the world. As Jodie Van Horn puts it, "Art can make renewable energy not so hypothetical so that it actually becomes desirable."

Artists can help expand support for environmental issues by using language, content, and images that speak to people who don't think of themselves as environmentalists, or who are even turned off by dominant representations of environmentalism and sustainability. Kate Wolford, president of the McKnight Foundation, notes: "Sometimes there is not a lot of trust in 'environmental' messengers in rural areas and post-industrial cities. Artists can be powerful influencers because art can cross boundaries and ideological barriers."

Relevant Case Studies:

- [HighWaterLine](#)
- [Land Art Generator Initiative](#)
- [Duwamish Revealed](#)
- [Perry Avenue Commons](#)
- [The Fargo Project](#)
- [Utah Diné Bikéyah](#)



Clear Creek Festival, Rockcastle County, KY. Photo credit: Melisa Cardona

Priority 2: Build Community Capacity and Agency

Addressing the disproportionate environmental harms borne by lower-income communities and communities of color, and ensuring that these same communities are not further disadvantaged by environmental solutions, is critical to ensuring that the future is both more sustainable *and* more just. This is the right thing to do from a moral perspective, but it may also be a necessity for achieving political wins. The 2016 ballot measure for a carbon tax in Washington State was opposed and defeated by environmental justice advocates who felt that it did

not do enough to create jobs and address pollution in “frontline communities,” the term used to describe the communities experiencing toxic pollution and environmental degradation “first and worst.”²⁴

Environmental justice (EJ) groups are working to ensure frontline communities are beneficiaries of the massive investments that are being and will be made to make the necessary transition to a carbon free economy.^{25 26} In California, the Asian Pacific Environmental Network (APEN) is working to direct one billion dollars of state renewable energy investments to low-income housing, in order to provide retrofitting jobs and reduce energy costs for low-income residents. Groups like the Green for All and the Emerald Cities Collaborative are working to

²⁴ David Roberts, “The Left vs. a carbon tax,” Vox, November 8, 2016, <http://www.vox.com/2016/10/18/13012394/i-732-carbon-tax-washington>.

²⁵ Kevin Bullis, “How Much Will It Cost to Solve Climate Change,” *MIT Technology Review*, May 15, 2014, <https://www.technologyreview.com/s/527196/how-much-will-it-cost-to-solve-climate-change/>

²⁶ Island Press and the Kresge Foundation, *Bounce Forward: Urban Resilience in the Era of Climate Change* (2015), <http://kresge.org/sites/default/files/Bounce-Forward-Urban-Resilience-in-Era-of-Climate-Change-2015.pdf>.

ensure that low-income communities benefit from the growth in green jobs. Others are advocating for community benefit agreements²⁷ and other mechanisms to ensure that “green” neighborhood improvements, such as parks, farmers markets and bike lanes, don’t displace low-income residents as rents rise.²⁸

However, even when their needs are considered, community residents are usually left out of planning and decision-making processes that will affect them, or only consulted for “buy in” after decisions are made. Community advocates argue that frontline communities themselves must be leaders in generating solutions and making decisions about their futures. Miya Yoshitani, Executive Director of the Asian Pacific Environmental Network (APEN), says, “We cannot allow the solutions to climate change to be developed without leadership from the communities that are most impacted by it.”

Community planners, developers and political leaders are becoming more interested in community-centered planning processes not only because these processes are more equitable, but because they also generate *better* solutions than top-down, expert driven processes.²⁹ Community members have first-hand knowledge that can inform solutions, and fostering community leadership builds the capacity to both implement plans for change and the resilience to face unanticipated challenges in the future. However, community-based planning and design is time consuming and complex, and it is outside of the realm of expertise or comfort of most policy makers and planners. In addition, shifting from a top-down to

community-driven model of resource distribution and decision-making may require the development of new capacities, systems, and practices, both within communities themselves and within governing institutions and agencies. Community planners and environmental advocates need people with imagination and expertise in these realms.

Art and culture can help by:

Building community cohesion, identity, power and leadership

Active art participation can develop a sense of personal power and fortify people’s sense of agency to make change in the world, which is why many environmental justice groups include it as a part of their organizing and community building work. Frances Lucerna from El Puente, an EJ group in Williamsburg, Brooklyn that integrates the arts into its programs, explains: “Art helps people see themselves positively and tap into their own potential for creation. The arts help people realize ‘I can’—they are an antidote for disempowerment.” This sense of personal capacity to influence outcomes is transformative for people that have been historically disenfranchised by political and economic systems or have experienced repeated trauma. Art can be a way for communities to acknowledge and heal so that they can move forward.

In addition, cultural spaces and activities provide contexts for building social bonds and shared identity, which is essential to movement building. Strengthening this “social infrastructure” gives communities the ability to respond effectively to environmental challenges as they occur and implement

²⁷ Julian Gross, *Community Benefit Agreements: Making Development Projects Accountable* (Good Jobs First and the California Partnership for Working Families, 2005), <http://laane.org/downloads/CBAStudy.pdf>.

²⁸ Brentin Mock, “Can we green the hood without gentrifying it?,” *Grist.org*, February 9, 2015, <http://grist.org/cities/can-we-green-the-hood-without-gentrifying-it/>.

²⁹ Danya Sherman, “How Community-Engaged Design is Changing Development,” *Next City*, May 18, 2016, <https://nextcity.org/daily/entry/what-is-community-engaged-design>,

changes. For example, the network created through the Clear Creek Festival's yearly gathering around music, food, and theater enabled the Appalachian community to quickly organize to resist natural gas exploration in the areas. Eric Klinenberg, Director of the Institute for Public Knowledge at New York University, argues that community cohesion is essential for resilience in difficult times: "Increasingly, governments and disaster planners are recognizing the importance of social infrastructure: the people, places, and institutions that foster cohesion and support."³⁰ Numerous studies have shown that people with stronger social ties fare much better in disasters than people who are isolated, regardless of income level.

Creating inclusive processes for dialogue and co-creation

The first step in community planning is to get people in the room. Arts and culture attracts people in ways that formal expert-driven planning processes do not. Elizabeth Yeampierre of the community based environmental organization UPROSE in Sunset Park, Brooklyn says, "Not everyone is going to want to sit in a workshop and talk about zoning after a full day of work. Maybe a mural or a song is the best way to start a conversation about displacement. We use art to draw people in." Art can also help groups who would otherwise not understand each other to communicate more effectively, whether activists and engineers, community members from different cultures, or scientists and artists. APEN's community in Richmond, California speaks at least five different languages and has a variety of literacy levels. Yoshitani says, "We use culture—especially imagery or experience—all the time. That is the way that people understand most powerfully, and the way that they communicate their ideas."

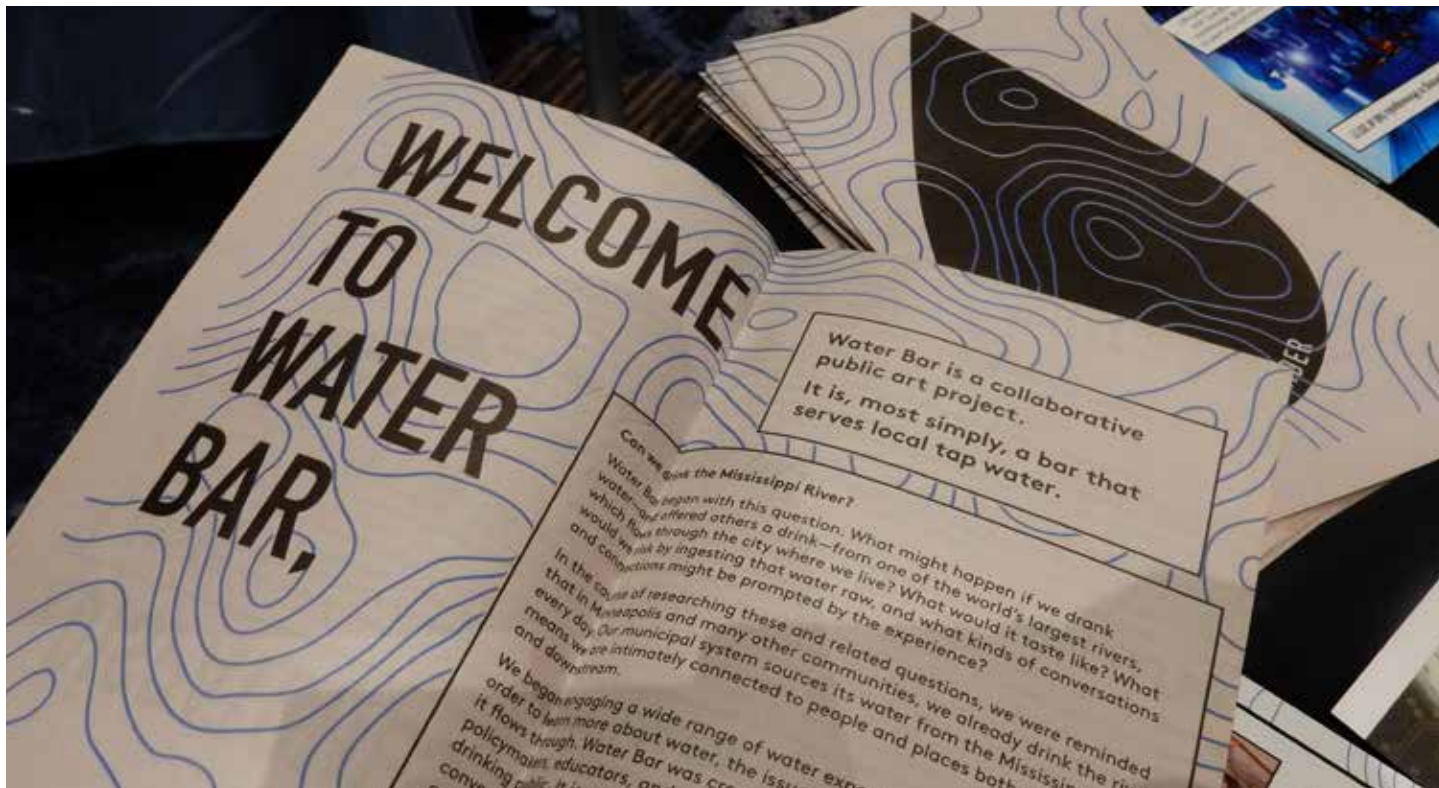
³⁰ Eric Klinenberg, "Adaptation: How can cities be 'climate-proofed'?", *The New Yorker*, January 27, 2013, <http://www.newyorker.com/magazine/2013/01/07/adaptation-2>.

Incorporating storytelling, music, visual art, movement and other creative methods into community planning processes can help shift the power dynamics between professional "experts" and community members, and encourage local residents to share more openly what they know and what they need. This can ensure solutions incorporate community-based knowledge and are culturally appropriate, making them more likely to be embraced by the community. For example, the Gulf Future Coalition (GFC), a regional organizing network, and Mondo Bizarro, an artist collective, worked together to help Louisiana Gulf Coast residents decide how to allocate the settlement money from the 2015 BP oil spill. They used local food, music and storytelling, and incorporated creative planning techniques which participating artist Nick Slie says "created conditions for people to be authentically and genuinely involved in the dialogue, like we [were] talking with our own families." Because of the success of this process in engaging the community, the Coastal Louisiana Protection Authority is now exploring ways of using art-based methods in planning on an ongoing basis. has had multiple ripple effects, the Coastal Louisiana Protection Authority is now exploring ways of using art-based methods in planning on an ongoing basis.³¹

Relevant Case Studies:

- [Clear Creek Creative](#)
- [Re-locate Kivalina](#)
- [Duwamish Revealed](#)
- [Perry Avenue Commons](#)
- [The Fargo Project](#)
- [Utah Diné Bikéyah](#)
- [Water Bar](#)
- [HighWaterLine](#)

³¹ Center for Performance and Civic Practice, *Catalyst Initiative: Louisiana 2015* (August 12, 2015), https://issuu.com/centerforperformanceandcivicpractice/docs/catalyst_initiative_louisiana_2015



Water Bar reader, with essays by artists and information from local water utilities and nonprofit organizations. Photo credit: Water Bar

Priority 3: Bridge Scales

Environmental issues —whether pollution, environmental degradation, or climate change—touch communities in distinctly local ways, and local action is a critical lever for change.³² However, effectively achieving local progress often requires thinking and acting at the much larger ecological scales of the watershed, food shed, or species range. In other instances, addressing large-scale environmental issues, such as climate change, water management or species conservation, requires strategic action in specific local places in order to shift outcomes for the whole.³³ Policy, advocacy, planning and resource

management structures are not often designed to operate across multiple scales or jurisdictions, and it is a challenge to do so. However, the urgency of the environmental problems we now face—climate change in particular—is pushing political and environmental leaders to seek new methods for organizing and coordinating action at the appropriate scale.

Some local areas are forming regional entities to help coordinate climate resilience planning. For example, the four counties around Miami have formed the Southeast Florida Climate Change Compact to deal with sea level rise, which is expected to reach at least five feet there in the next fifty years. These collaboratives have no official authority, but regions with such entities are moving much more quickly on

³² Rebecca Leber, "Inside the climate movement's Trump-fighting strategy," *Grist.org*, November 17, 2016, <http://grist.org/politics/climate-movement-trump-strategy/>

³³ Ben Adler, "Cities are lapping countries on climate action," *Grist.org*, September 29, 2014, <http://grist.org/cities/cities-are-lapping-countries-on-climate-action/>.

establishing targets, engaging diverse stakeholders, developing policy recommendations, aligning building codes and attracting funding.³⁴

Others are working to coordinate a range of players to target actions to localities where progress will impact environmental outcomes for all. Katherine Gajewski, former Chair of the Urban Sustainability Directors Network, comments on the climate mitigation field: “To reach our overarching greenhouse gas reduction targets, it is not enough to work as we have to date—opportunistically with whomever comes to the table or where it is easiest to work. Instead, are there ten states where we can focus our attention and resources to have the biggest impact on overall carbon emissions?”

Many issues experienced as “local” are actually system-wide problems with local manifestations. This includes lead poisoning, extractive industry pollution, and various effects of climate change. Building trans-local coalitions can speed knowledge transfer and improve outcomes across all affected communities. The C40 Cities Climate Leadership Group, the Climate Justice Alliance (CJA), the Urban Sustainability Directors Network, and the U.S. Water Alliance are working to build trans-local networks that can amplify the impact of local actions for sustainability by sharing knowledge of what works, raising visibility of systemic issues, and building coalitions of like-minded people.

Art and culture can help by:

Connecting local experiences with larger contexts

Often local communities can be isolated in their environmental struggle, even when the problem—like lead poisoning or fossil fuel extraction—is actually systemic and wide-spread. Art can help unite people

in different communities who share a common experience, which can be essential to driving action at the scale required to address the problem. For example, a proposed oil pipeline route in Virginia, New York, and New Hampshire stands to impact thousands of individual landowners and mostly rural communities along the route. Since 2015, artist Aviva Rahmani has been working with individual landowners to paint musical notes in blue paint on trees on their property. The copyright of the evolving musical composition, *Blued Trees Symphony*, is then used as legal ground for communities to fight the pipeline in court. The trees create a visual symbol of the scope of community resistance and solidarity, and helps people feel empowered to make change. Because the project crosses a large geographical scale, the pipeline cannot simply re-route around a few recalcitrant landowners, but must be reconsidered entirely.

Culture can also connect communities that are not geographically contiguous but share a common struggle or experience. In Kivalina, Alaska, the Inupiaq people have been working to relocate as their land becomes uninhabitable due to sea level rise. They have worked for years to get resources and support from the U.S. government, but have had little success. In the last few years the tribe has begun to align with a growing global movement of indigenous groups all seeking to protect their land-based cultures from the impact of climate change. As a vivid local example of a systemic issue, the Inupiaq have been able to attract attention, support and resources from national and international partners including lawyers, archeologists, funders, scientists and engineers and others who are working on issues of sea level rise, climate displacement, and indigenous rights. This global alliance has given the Inupiaq a more powerful basis from which to negotiate with the U.S. and Alaskan governments and regional corporations.

³⁴ Annie Bennett and Jessica Grannis, *Lessons in Regional Resilience: Case Studies on Regional Climate Collaboratives* (Washington, D.C.: Georgetown Climate Center, 2017), http://www.georgetownclimate.org/files/report/GCC-Lessons-in-Regional-Resilience-Synthesis-Jan_2017.pdf

Helping people find common ground across political, geographical and ideological boundaries

Art driven processes can provide safe, neutral ways for stakeholders with very different perspectives to come together, build trust, and find common ground. For example, collaboration between the communities that share access to watersheds is becoming more and more essential with the pressures of climate change and population growth. However, localities often do not see how their choices about water—irrigation, wetlands management, urban design, etc.—impact other communities or the larger whole, or people simply disagree about priorities. Such disagreements between communities can cripple sustainable planning efforts. Political or advocacy driven processes with strong agendas often entrench rather than bridge differences that are ideological in nature.

Water Bar, an art project by a collaboration of Minnesota artists, engages people in sharing personal stories around water through a “bar” that serves water from different locations around the state. The artistic framing and welcoming space creates a context for truly human connections, regardless of sector, geography, or views. People can ask questions, get information, share their experiences with water, and hear other people’s stories, which can bridge divides and open people to new ways of looking at issues. Because of their success in bridging diverse constituencies and sectors, Water Bar is now sought out by environmental organizations and political leaders across the state who have a desperate need to build bridges between stakeholder groups. Artist Nick Slie with the New Orleans-based artist collective Cry You One explains this phenomenon: culture “is the only thing that unites across all silos. Lobbyists don’t bring scientists to Congress,

they bring storytellers. Stories inherently allow you to see the intersections between different issues as they affect people.”³⁵

Relevant Case Studies

- [Re-locate Kivalina](#)
- [Water Bar](#)
- [Utah Diné Bikéyah](#)

³⁵ Center for Performance and Civic Practice, *Catalyst*, 2015.



Photo Credit: The Fargo Project, City of Fargo

Priority 4: Enrich and Activate the Built Environment

Massive investments are needed to create new and more sustainable infrastructure—smart-grids; building weatherization; coastal wetland restoration; climate resilient infrastructure; stormwater, clean water, and food and waste distribution systems; and more.³⁶ Over the next 20 years, it will cost at least \$1 trillion to fix the water system³⁷ and \$12.1 trillion to build renewable energy infrastructure alone.³⁸

³⁶ The American Society of Civil Engineers gave the U.S. infrastructure a D+ rating in 2017. <http://www.infrastructurereportcard.org/>.

³⁷ The Aspen Institute, *Innovating for a Sustainable and Resilient Water Future* (Washington, D.C.: The Aspen Institute, 2014), https://nicholasinstitute.duke.edu/sites/default/files/publications/2014_water_forum_report.pdf.

³⁸ Bloomberg New Energy Finance and Ceres, *Mapping the Gap: The Road From Paris* (January 26, 2016), <https://www.ceres.org/resources/reports/mapping-gap-road-paris>.

However, attracting public buy-in and private investment for this infrastructure is not easy, especially when the benefits are not immediately visible (such as a city *not flooding* during heavy storms) or only apparent over the long term. In addition, investments that are framed as “environmental” can trigger ideological resistance.

Infrastructure solutions that provide co-benefits,³⁹ or serve “two needs with one deed,” can make resources go farther and attract a broader coalition of supporters.⁴⁰ This can avoid competition between equally legitimate needs, and provide more

³⁹ Rieke Hansen and Stephan Pauleit, “From Multifunctionality to Multiple Ecosystem Services? A Conceptual Framework for Multifunctionality in Green Infrastructure Planning for Urban Areas,” *Ambio* 43(4) (April 2014): 516–529, doi: 10.1007/s13280-014-0510-2, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3989511/>.

⁴⁰ Laurie Mazur, “Meet Obama’s chief resilience officer,” *Grist.org*, February 26, 2015, <http://grist.org/climate-energy/meet-obamas-chief-resilience-officer/>.

possibilities for accessing public or philanthropic funds available for specific purposes, such as resilience or water quality. Research has found that infrastructure that provides economic and social benefits is better at motivating “public, private and financial actions to address climate change” even “across ideological divides” than pitches for investments on an environmental basis alone.⁴¹ The U.S. Green Building Council, for example, has found that the cost savings and job creation possibilities of LEED-certified buildings attract bi-partisan support.⁴² Especially appealing are co-benefits that tangibly and immediately improve the quality of place—such as walkable and beautiful neighborhoods, access to fresh food, green space for recreation—at the same time as they address environmental issues like stormwater runoff or energy efficiency.

Movements like Smart Growth and Sustainable Urbanism are helping to provide conceptual frameworks for approaching development in this more holistic way. Entities like Eco-Districts EPA's Greening America's Communities program, and tools like community benefit agreements, are helping to operationalize co-benefits on the ground. All of these stakeholders are seeking ways to make necessary sustainable infrastructure investments more appealing and fulfill a wider range of public purposes.

Art and culture can help by:

Creating infrastructure that meets people's social, aesthetic, and spiritual needs

Creative placemaking projects often intervene in the built environment, whether by beautifying or

animating existing infrastructure, or building new physical fabric. This can help ensure that sustainable infrastructure meets communities' social and aesthetic needs, as well as their environmental ones. For example, the city of Fargo, North Dakota has long struggled with its storm water detention basins, which have created ugly swaths of barren land through the city and divided communities. Through *The Fargo Project*, the late artist Jackie Brookner and a team of other artists worked with community members, engineers, and the city government to help the community reimagine what the basins could be. Together, they designed a series of amenities that include sculptural features, a natural amphitheater, community gardens and festival spaces. The creative process of imagining these features also brought people together in new community-building ways. Fargo City Planner Nicole Crutchfield says, “By working with artists and using a creative problem-solving lens, we were able to find solutions that functioned on multiple levels—ecological, spiritual, infrastructural, and aesthetic.”

Creative placemaking infrastructure is usually relatively small scale. Some environmental sector leaders consider small-scale solutions to be essential components of an overarching sustainable infrastructure solution. Small-scale infrastructure can more easily be owned and controlled by local communities; can be more responsive to local conditions; costs less to build; and makes the system more resilient to shocks. *The Land Art Generator Initiative* is working to show that small-scale renewable energy infrastructure is feasible in densely populated communities, and can actually be used to create compelling and beautiful public spaces at the same time. Small-scale solutions, like green infrastructure or renewable energy

⁴¹ Paul G. Bain et. al., “Co-benefits of addressing climate change can motivate action around the world,” *Nature Climate Change* 6 (2016): 154–157, doi: 10.1038/nclimate2814, <http://www.nature.com/nclimate/journal/v6/n2/full/nclimate2814.html>.

⁴² U.S. Green Building Council, “New Poll Shows Strong Bipartisan Support for LEED Green Building Program,” February 26, 2015, <http://www.usgbc.org/articles/new-poll-shows-strong-bipartisan-support-leed-green-building-program>.

generators, can demonstrate what is possible and generate appetite for larger-scale change, or be replicated widely to increase impact.

Designing physical spaces that cue and reinforce new and more sustainable thinking and behavior

Creative activity can create an appealing and visible symbol of sustainability and regeneration, which can change what local residents and outsiders see as possible for a place and prompt rapid changes in how people behave. Artist Emmanuel Pratt credits the arts elements of *Perry Avenue Commons*' multi-block aquaponic farming operation in Chicago with generating buy-in from local community members, city officials and investors. The large mural on the site "became a beacon" for the community and a "symbol of care." This changed how people saw the area—from a dilapidated and dangerous place to be avoided to one that was worth nurturing and investing in. This has led to multi-generational community engagement in the farm, which has enabled it to thrive and created additional social and economic benefits for the community. Pratt says, "The second we activated the garden through art and culture, not only did vandalism completely disappear, we became an international tourist destination point." As a result of this positive attention to a previously neglected part of the city, city officials have permitted kinds of activities that are not covered by existing zoning regulations, further spurring Perry Avenue's growth and impact, and making the city more willing to embrace community-driven economic development. Studies confirm that small, affordable interventions in public space can have significant impacts people's attitudes and feelings about a place.⁴³

Clark Wilson from the Environmental Protection Agency's Greening America's Communities program says that this stretching of the imagination

about what is possible is critical for generating local solutions to our current environmental problems. After all, the *status quo*—in both our thinking and codes—is part of the problem. Wilson says: "I tell people, 'Don't be constrained by codes and standards—they can change. Let's start with the vision and then address the logistics, so that the things you love or grew up with can once again be allowed.'"

Remy de la Peza, formerly of Sustainable Little Tokyo in Los Angeles, notes that working with an artist helped them come up with new ways of thinking about how green infrastructure could meet community needs. She says, "If we are going to make progress on the challenges we are facing today, we are going to have to get out of the box of what is currently allowed."

Relevant Case Studies

- [The Fargo Project](#)
- [Perry Avenue Commons](#)
- [Land Art Generator Initiative](#)
- [Water Bar](#)

⁴³ Patrick Sisson, "Shaping space for civic life: Can better design help engage citizens?," *Curbed*, June 22, 2017, <https://www.curbed.com/2017/6/22/15854608/urban-planning-community-engagement-litter>



In the spirit of a traditional barn raising, more than 50 volunteers joined Sweet Water Foundation staff and expert tradesmen from Trillium Dell Timberworks to manually raise “The Thought Barn,” a central part of Perry Avenue Commons in Chicago, IL. Photo credit: Sweet Water Foundation

Priority 5: Nurture Sustainable Economies

Leading economists, government and business leaders now agree that not addressing environmental issues, especially climate change, is a huge economic mistake.⁴⁴ However, our existing economic incentives and ways of measuring value obscure the true costs of environmental harm and benefits of sustainability. To achieve sustainability, economic incentives need to promote rather than discourage sustainable choices by individuals, corporations and the public sector. We must also pro-actively nurture economic alternatives to

environmentally harmful, extractive industries.

Currently, the costs of environmental degradation — from impacts on health to remediation of pollution to emergency relief efforts following climate change disasters — are borne by the public sector, and are externalities for the polluting industries themselves. This represents a “market failure,” according to economists, because the current business costs of pollution and using up finite natural resources does not align with their actual, real costs to society.⁴⁵ Carbon taxes are an approach that is increasingly popular across party lines as a way to account for the “social cost” of emissions,⁴⁶ designed to incentivize sustainability

⁴⁴ Kate Gordon, *Risky Business: The Economic Risks of Climate Change in the U.S.* (Risky Business, 2014), <https://riskybusiness.org/report/national/>

⁴⁵ Lester Brown, “The ‘invisible hand’ is blind to climate externalities and the value of natural resources,” *Grist.org*, December 18, 2008, <http://grist.org/article/a-massive-market-failure/>.

⁴⁶ Yale University Economist William D. Nordhaus calls SCC “the most important single economic concept in the economics of climate change,” noting that it has led to “regulations with more than \$1 trillion of benefits” in the U.S. since the federal government began to use it in policymaking in 2009. In “Revisiting the social cost of carbon,” *Proceedings of the National Academy of Sciences of the United States of America*, 114(7) (February 2017): 1518-1523, doi: <https://doi.org/10.1073/pnas.1609244114>.

and generate revenue for addressing environmental problems.⁴⁷

It is also essential to be able to more accurately measure and track the economic benefits of sustainability across a wide range of dimensions—better health outcomes, improved crop yields, avoidance of natural disasters, invasive species management, natural resource-based livelihoods, and so on. Green jobs and green economy growth are fertile areas for demonstrating the economic benefits of sustainability and replacing environmentally harmful industries and jobs. Groups like Green for All are focused on ensuring that green jobs go to frontline communities first. Labor-environment coalitions, such as the Blue-Green Alliance, are focused on broadening the base of public and political support for environmental issues to include people for whom jobs are a primary concern.

Ultimately, changing incentives and how value is measured is the first step toward nurturing a new economic paradigm that is not built around unlimited growth, consumption, fossil fuel extraction and inequality, but rather serves human needs and is aligned with natural limits.⁴⁸ Growing numbers of environmental leaders see local sustainable economies as important building blocks of this new paradigm. Local economies have many environmental benefits in and of themselves—they are more responsive to local conditions and needs, reduce emissions from transportation of resources and people, and nurture community stewardship over place. Some local economy models—small-scale food systems, community land trusts, waste re-use industries, and distributed energy generation—provide added environmental benefits. The emerging peer-to-peer energy economy, for

example, can operate independently during larger energy grid failures.⁴⁹ Some business models, like worker-cooperatives or “triple bottom line” social enterprises, are also working to embed care for people and the planet in their structures. To tip the scales towards sustainability, these “new economy” experiments need to spread and displace the dominant model. Groups like the Business Alliance of Local Living Economies (BALLE), the New Economy Coalition, and Beautiful Solutions are working to make successful practices more visible.

Art and culture can help by:

Generating, Revealing or Redefining Value

Art and culture can create new economic value or reveal latent value in something previously thought to be worthless. *Perry Avenue Commons* started its farm on property that had been vacant for years because developers couldn’t calculate a viable return on investment (ROI) using traditional economic metrics. Now, the farm supplies food to neighborhood residents and Chicago restaurants, provides jobs for local residents, and generates enough renewable energy to sell back to the grid. Murals, sculptures, performances, and design raise the value of the site and the neighborhood, and are essential elements of the project’s economic success. However, despite being very real, these economic benefits are not accounted for in existing ROI calculations of planners, developers, banks, and investors. Pratt is working with Harvard and MIT on developing new models to measure the true value of “triple bottom line” projects like this.

Numerous creative placemaking projects are contributing to the creation of new economies by

⁴⁷ Robinson Meyer, “The Republican Carbon Tax Is Republican, Say Republicans,” *The Atlantic*, February 8, 2017, <https://www.theatlantic.com/science/archive/2017/02/a-republican-proposal-for-a-carbon-tax-okay/516048/>.

⁴⁸ Fullerton, *Regenerative Capitalism*, 5.

⁴⁹ Diane Cardwell, “Solar Experiment Lets Neighbors Trade Energy Among Themselves,” *New York Times*, March 13, 2017, https://www.nytimes.com/2017/03/13/business/energy-environment/brooklyn-solar-grid-energy-trading.html?ref=energy-environment&_r=1.

reclaiming and adding value to wasted materials. *Upcycle Parts Shop* in Cleveland, Ohio and *crackedpots* in Portland, OR are two of many artist-run businesses that are repurposing recycled materials for creative reuse. Neil Seldman, who runs the Waste to Wealth initiative at the Institute for Local Self Reliance, says that such secondary reuse markets are a key driver of generating buy-in from municipalities for recycling. Seldman argues that creative businesses and markets are critical to scaling recycling efforts because they change how people perceive and value waste.

Helping drive more sustainable local economies

A number of Native-led creative placemaking projects, including the *Grand Canyon National Park's Desert View Visitor Area* and *Utah Diné Bikéyah*, are working to build new economies in Native communities that generate revenue through preserving natural and cultural resources. Utah Diné Bikéyah, a coalition formed by five Native tribes in the area, has an economic plan for local Native arts and heritage tourism at the Obama-designated Bears Ears National Monument. This entails preserving and stewarding the natural environment of the area, which is fundamental to local tribes' cultural traditions – foodways, spiritual ceremonies, health practices, youth education and all other aspects of community life. The plan would allow local tribal members to earn a living while caring for the land and sustaining their culture. The tribal coalition understands that demonstrating the economic value of land preservation (versus resource extraction) is critical to avoiding ideological resistance to “environmental” projects, and generating broad-based public support. If the plan works, it could be a new model for land management nationwide.

Art can also raise the visibility of successful models for non-extractive, green economies. In San Francisco, for example, Green Streets is a social enterprise that sorts waste generated by

low-income housing developments in the city. It diverts over 20,000 pounds of trash per worker, themselves residents of the housing developments, and saves property managers money by helping them comply with the city's zero waste laws. Citizen Film has been working with Green Streets for the last seven years to tell its story on film. Green Streets can then use the films to recruit new participants in the program (both housing developments and workers) and educate city officials and businesses about how green jobs can provide pathways out of poverty, achieve zero waste goals, and build local economies.

Relevant Case Studies

- [Perry Avenue Commons](#)
- [Utah Diné Bikéyah](#)
- [Clear Creek Creative](#)

“We can’t just *te//* people wind and solar are better, and do economic impact studies about how they create jobs. People cannot imagine it unless it is visible. People need to see and *fee/* it—how does my daily life change?”

— Jodie van Horn, Director, Ready for 100, Sierra Club

ANOTHER WAY IN: ENVIRONMENTAL ISSUES

The five priorities in this scan— sparking public demand, building community capacity and agency, bridging scales, enriching the built environment, and nurturing sustainable economies—hold true for all of the environmental issues we reviewed. Our research found that these priorities, if achieved, can meaningfully accelerate progress towards sustainability overall and in each of the areas below. Because many environmental sector practitioners approach their work through the lens of particular issue areas, however, this section summarizes a high level goal for each of those issues and notes the arts and cultural projects that are most relevant to it.

1. Climate Adaptability and Resilience. Goal: Prepare communities to deal with the impacts of climate change, and seize the opportunity that adaptation provides to improve quality of life for vulnerable populations.

2. Energy. Goal: Make a just transition to 100% clean energy that produces positive benefits for communities.

3. Water. Goal: Ensure all communities have clean, safe, reliable, and manageable quantities of water now and in the future.

4. Land. Goal: Use and manage land in ways that equitably serve the needs of different communities and sustain resources over the long term.

5. Waste. Goal: Reduce the negative impacts of material waste, and maximize the potential benefits of recycling and reuse for communities.

6. Toxic Pollution. Goal: Clean up existing toxic sites and prevent additional pollution in communities.



Artist Eve Mosher explains sea level rise to onlookers as part of the HighWaterLine project, Miami Beach, FL. Photo credit: Jayme Gershen

Issue 1: Climate Adaptation and Resilience

Climate change is the long-term change in the Earth's climate as a result of the increased greenhouse gases in the atmosphere, mostly attributable to humans' use of fossil fuels. It is intertwined with environmental issues addressed in this field scan, but it has become a distinct area of professional focus in recent years as climate change hazards have become more apparent and urgent. Despite the growing global recognition of the need to transition away from fossil fuels to stop the progression of climate change and keep warming

below two degrees, there is broad agreement that communities will still face significant adverse effects, even if we reduce emissions immediately. As a result, we need to reduce emissions while simultaneously preparing communities for a radically different future that involves sea level rise, extreme temperatures, and more frequent natural disasters, among other changes.⁵⁰

For examples of projects where artists are tackling climate adaptability and resilience issues, see the [Re-locate Kivalina](#) case study on page 59, or the [HighWaterLine](#) case study on page 63.

⁵⁰ Julie Blue, Emily Seyller, and Susan Julius, *Evaluating Urban Resilience to Climate Change: A Multi-Sector Approach* (Washington, D.C.: Environmental Protection Agency, 2017), <https://cfpub.epa.gov/noea/risk/recordisplay.cfm?deid=322482>



Land Art Generator Initiative's Art + Energy Camp, Pittsburgh, Summer 2015, artenergyocamp.org. Photo credit: Land Art Generator Initiative

Issue 2: Energy

In the Paris Climate Agreement of 2015, 194 countries agreed to transition off of fossil fuel-based energy sources to 100% clean energy sources as quickly as possible.⁵¹ In the U.S., there is a growing professional consensus on the need to focus strategically on the sectors (e.g. transportation, agriculture, buildings) and locations (e.g. Chicago, Houston, Los Angeles) where carbon emissions can be reduced farthest, fastest.⁵² Transitioning to clean energy is both technologically possible and economically viable, but the

magnitude and speed of the changes required will mean massive adjustments at the community and individual levels. Some activists are focused on ensuring a “just transition,” so that the necessary changes do not further harm already disadvantaged communities, and also that the estimated \$12.1 trillion investment needed for a renewable energy transition be leveraged to create jobs and community improvements for those who need it most.⁵³

For examples of projects where artists are tackling energy issues, see the [Land Art Generator Initiative](#) case study on page 57, or the [Perry Avenue Commons](#) case study on page 49.

⁵¹ Rebecca Leber, “The Paris climate accord is a big fucking deal,” *Grist.org*, November 4, 2016, <http://grist.org/climate-energy/paris-climate-agreement-official/>

⁵² David Roberts, “Hillary Clinton’s climate and energy policies explained,” *Vox*, July 29, 2016, <http://www.vox.com/2016/5/9/11548354/hillary-clintons-climate-and-energy-policies-explained>.

⁵³ Alex Morales, “Paris Climate Deal Seen Costing \$12.1 Trillion Over 25 Years,” *Bloomberg*, January 29, 2016, <https://www.bloomberg.com/news/articles/2016-01-29/paris-climate-deal-seen-costing-12-1-trillion-over-25-years>



Greensboro Water Resources and Guilford College collaborate to create and staff a mobile Water Bar for Elsewhere's South Elm Projects, Greensboro, NC. Photo credit: Elsewhere

Issue 3: Water

Water is essential to life. The availability, potability, use, and management of water are issues for every community and they shape debates over drinking water, storm water, wastewater, and natural waterways. Our water infrastructure is failing. As a 2014 Green for All report stated: "In 2013, America's crumbling water infrastructure received a 'D' grade from the American Society of Civil Engineers. As our water systems age and decline, the health, safety, and prosperity of our communities are increasingly at risk. Meanwhile climate change — marked by heavy rains, extreme

weather, and rising sea levels — magnifies the problem and perpetuates a water crisis we can no longer ignore."⁵⁴ Water crises were identified as one of the top global risks to industry and society in the World Economic Forum's 2017 annual survey, which canvasses 750 of the world's top business and political leaders.⁵⁵ Many see water as the most powerful "entry point" to other less tangible environmental issues, like climate change and energy, because it is a resource that people connect to on personal and daily basis.

For examples of projects where artists are tackling water-related issues, see [The Fargo Project](#) case study on page 51, or the [WaterWorks](#) project by Mountain Time Arts.

⁵⁴ Alvaro Sanchez, *Clean Water, Strong Communities* (Green for All, 2014), <http://d3n8a8pro7vhm.cloudfront.net/greenforall/pages/2393/attachments/original/1429892288/CleanWaterStrongCommunities.pdf?1429892288>.

⁵⁵ Sam Meredith, "Top five global risks for 2017: WEF," *CNBC*, January 11, 2017, <http://www.cnbc.com/2017/01/11/top-five-global-risks-for-2017-wef.html>.



Perry Ave Commons boasts more than four acres of urban farm land, a community garden, and a foreclosed house turned community wellness hub. The transformation was fueled by Sweet Water Foundation's intensive education and career program through which local youth, alongside mentors and elders, transform 'blighted' spaces into economically and ecologically productive community assets. Photo credit: Sweet Water Foundation

Issue 4: Land

How land is managed is one of the most basic environmental decisions communities make because what happens on land—whether and how it is used for agriculture, resource extraction, species / habitat preservation, parks, or urban developments—has many other environmental repercussions. Land is the site of human habitats, as well the source of our energy (whether fossil fuels or renewables) and food. Land conservation is critical to ecological health and biodiversity. Access to clean open spaces and regular connection with nature is essential to human biological and

psychological health, everywhere.⁵⁶ Land management is essentially a negotiation between different stakeholders and interests and can be contentious when interests conflict. Public land—from national forests to urban parcels—is where the majority of battles over land use take place. These battles are likely to intensify as populations grow, climate change influences the habitability of certain places, and the imperative of ecological stewardship for human survival increases.

For examples of projects where artists are tackling land-related issues, see the [Utah Diné Bikéyah](#) case study on page 53, or the [Blued Trees Symphony](#) project by Aviva Rahmani.

⁵⁶ Mathew P. White, Ian Alcock, Benedict W. Wheeler and Michael H. Depledge, "Would You Be Happier Living in a Greener Urban Area?," *Psychological Science* 24(6), (April 23, 2013): 920-928, doi: <https://doi.org/10.1177/0956797612464659>.



A Green Streets participant sorts recyclables in the Western Addition neighborhood of San Francisco, CA. Photo credit: Paige Green, courtesy of Citizen Film

Issue 5: Waste

The environmental, economic and health costs of both consumer and business material waste, including food waste,⁵⁷ fall on local communities. Most municipalities pay private waste companies a fee to dispose of waste, which they then “burn and bury” in incinerators and landfills, which are frequently sited in low-income communities and communities of color. Some of this waste releases toxic by-products that cause health and environmental damage. Zero waste advocates argue that this way of dealing with waste puts unnecessary burdens on communities and misses the social and economic opportunities of reuse and recovery.⁵⁸

⁵⁷ Hazardous industrial waste, pesticides, and mining and extractive waste are defined by the waste industry as toxics, not waste, and are included in the toxic pollution section of this field scan.

For examples of projects where artists are tackling land-related issues, see the [Green Streets](#) project by Citizen Film, or the [Upcycle Parts Shop](#) project in Cleveland, OH.

⁵⁸ Institute for Local Self-Reliance Waste to Wealth Initiative, <https://ilsr.org/initiatives/waste-to-wealth/>.



Thousands of Ancestral Puebloan, Ute, Paiute, and Diné sites are well preserved across San Juan County, Utah, but will be at risk should mining and extractive industries be allowed in the region. Photo credit: Gavin Noyes / Utah Diné Bikéyah

Issue 6: Toxic Pollution

Toxic pollution harms public health and ecological systems in ways that we have yet to fully understand. Research on environmental and health impacts of new toxins and monitoring levels of regulated toxins is not well-funded, and is often actively fought by powerful corporate interests. There is increasing evidence that toxic exposure is ubiquitous in the food we eat, the products we use, and our physical environment. Low-income communities and communities of color are more likely to be exposed to toxins where they live, work, and play. This is a result of many factors, including discriminatory land use and waste siting decisions and economic inequality. There is a long history of activism around environmental health driven by community

members and journalists, mostly in reaction to pollution crises. Many in the environmental justice movement are now shifting from simply resisting problems—such as incinerators or fossil fuels—to fighting for positive alternatives—like recycling and clean energy industries.

For examples of projects where artists are tackling issues related to toxic pollution, see the [Duwamish Revealed](#) case study on page 47, or the [Illuminating Futures](#) project by Dan Borelli.

**“We use culture—
especially imagery
or experience—all the
time. That is the way
that people understand
most powerfully,
and the way that they
communicate their
ideas.”**

— Miya Yoshitani, Executive Director, Asian Pacific Environmental Network

METRICS AND MEASUREMENT

As part of our research, we sought to identify metrics that the environmental sector is using to measure progress. There are obvious high-level metrics agreed upon by all, such as the reduction of greenhouse gases in the atmosphere. There are also important issue-specific metrics, such as number of parks or air quality. However, in interviews and in the working group, we heard repeatedly that many think that the current metrics utilized by the environmental sector are insufficient to guide and measure community progress towards sustainability. Many are currently rethinking what is important to measure, and how to measure it most accurately. Measurement-related challenges the sector is struggling with include the following:

- The short timeframes of political, philanthropic and business decision-making do not align with those required to see meaningful progress on sustainability or systems change. Current metrics encourage short-term thinking, and privilege interventions that will deliver outcomes in the near term but are less effective for long-term sustainability goals.
- Human and natural ecologies are complex and dynamic systems with many uncontrolled and uncontrollable variables, making it impossible to isolate which inputs have contributed to which outcomes. The reality is that many variables interact to influence change, including “wild card” factors with unpredictable effects (e.g., a superstorm or an election result).
- Relevant data can be elusive. The data that is easiest or most feasible to collect is not always the most important or relevant, and sometimes the things that are most important are difficult or impossible

to measure (e.g., the comprehensive benefits of healthy ecosystems). In many circumstances, the desirable outcome is for something to not occur, like trauma or displacement due to a climate change related event.

- Because there is a heavy bias toward economic indicators, we have not developed sophisticated measures for things that are not economic in nature—human life, nature, and happiness, for example. Translating everything into economic terms often leads to illogical choices.
- There is resistance to data collection in some areas—such as toxics and public health—due to lobbying by corporate interests against it and lack of will and resources among public sector entities. This means that even when standards are set, they may not be enforced.

How resources are distributed for sustainability has real consequences, so evaluation rigor and accountability are essential. However, new methods for understanding and measuring sustainability are needed – methods that are more relevant to complex, dynamic systems. Scientists studying complex systems make “credible inferences” from available evidence, using standards that are generally agreed upon by the relevant professional communities of practice. Over time this builds a body of evidence—some quantitative, some anecdotal—that can support claims for causality.

That “off the shelf” metrics for environmental sustainability do not exist may be an opportunity for cultural practitioners to help develop new, more holistic approaches for gathering and interpreting impact.

“Artists can be powerful influencers because art can cross boundaries and ideological barriers.”

— Kate Wolford, President, McKnight Foundation

CONCLUSION: WHAT NEXT?

This field scan was an initial inquiry into the intersection of art and culture and environmentally-focused community development, and as such is intended to be a conversation starter, not an end in itself. We found clear evidence that creative placemaking can accelerate environmental progress in communities, and in fact it is already doing so by helping to:

1. Spark public demand

- Making environmental issues personal, emotional and salient
- Showing people what sustainability can actually look and feel like

2. Build community capacity and agency

- Building community cohesion, identity, power and leadership
- Creating inclusive processes for dialogue and co-creation

3. Bridge scales

- Connecting local experiences with larger contexts
- Helping people find common ground across political, geographical and ideological boundaries

4. Enrich and activate the built environment

- Creating infrastructure that meets people's social, aesthetic, and spiritual needs
- Designing physical spaces that cue and reinforce new and more sustainable thinking and behavior

5. Nurture sustainable economies

- Generating, revealing or redefining value
- Helping drive more sustainable local economies

The environmental sector is open to new approaches and creative strategies for accelerating and amplifying change, and there are many artists and creative entities doing great work on the ground. There are countless opportunities to build stronger cross-sector partnerships and to more effectively advance sustainability. This research shows that it isn't a choice between arts and culture *or* advancing change through policy, engineering, activism or other traditional environmental sector approaches—we can in fact go farther, faster, together.

“By working with artists and using a creative problem-solving lens, we were able to find solutions that functioned on multiple levels—ecological, spiritual, infrastructural, and aesthetic.”

— Nicole Crutchfield, Planning Administrator, City of Fargo / The Fargo Project

CASE STUDIES

This section includes nine case studies that demonstrate different ways that arts and cultural strategies are being used to address environmental goals at the community level. Most of these projects address multiple environmental goals at once, which is one of the strengths of arts and cultural approaches.

Case Study 1: Duwamish Revealed, Seattle, WA

Case Study 2: Perry Avenue Commons, Chicago, IL

Case Study 3: The Fargo Project, Fargo, ND

Case Study 4: Utah Diné Bikéyah, San Juan County, UT

Case Study 5: Water Bar & Public Studio, Minneapolis, MN

Case Study 6: Land Art Generator Initiative, Various Locations

Case Study 7: Re-locate Kivalina, Kivalina, AK

Case Study 8: Clear Creek Creative, Rockcastle County, KY

Case Study 9: HighWaterLine, Miami, FL

Case Study 1

Duwamish Revealed

Seattle, WA

Related to: demand, capacity, toxic pollution, water

Aerialist Tanya Brno performs suspended by a crane above the Duwamish River in an illuminated moon created by sculptor Yuri Kinoshita. The performance was accompanied by Coast Salish flutist and storyteller Paul Che Oke Ten Wagner (Saanich tribe). Photo by Tom Reese.

The Duwamish River is Seattle's only river. In 2001 it was designated a Superfund site, a result of decades of pollution from sewage overflows and industrial chemicals.⁵⁹ The communities surrounding the river are diverse—including communities of immigrants from Central & South America, Southeast Asia, and Africa—and largely low-income. Three Native tribes have ties to the river, including the Duwamish Tribe for whom the river is named. The river's toxicity is well-known, and it has numerous health and environmental impacts on the surrounding area. The official Superfund cleanup plan is massive and will continue over decades, yet, in the opinion of many local environmentalists, it does not go far enough.

Tenacious community activists and environmental justice (EJ) groups in the area have been working for years to educate people about the river's toxicity and advocate for clean up. However, all but the most committed environmental activists saw the river as a lost cause, and many Seattleites avoided it or remained unaware of its existence.

In 2015, Seattle artists Sarah Kavage and Nicole Kistler realized that people's fear of and alienation from the river were hindering the ability of environmental groups to generate public pressure for change. As Kavage says, "You can't ask people to fight for something that they don't care about." Paradoxically, the communication methods used by EJ groups—either highly technical information or warnings—actually perpetuated this sense of alienation and the widespread view that the river was "dead."

Over the course of a year, the artists worked with a local EJ group Environmental Coalition of South Seattle (ECOSS) to design a creative celebration about and along the river. The intention was to help change perceptions of the river, through creating a context for the nearby residents and others from

around the region to experience it in an alternative and more positive way. They hoped this might help build a broader constituency of people motivated and inspired to fight for it to be cleaned up.

The summer long celebration included artists from the communities that border the river and others in the city. It featured site specific sculpture, performance, participatory events, aerial performances, food, rituals honoring and blessing the river, traditional dancing, and expressions of specific cultures, such as Mexican *lucha libre* wrestling. Many immigrant groups living near the river created events to honor and share the particular ways that their cultures relate to rivers.

The festival and the organizing that took place to make it happen helped to shift and deepen people's connections to the river, and vastly expanded what people could imagine for it. It activated people who do not self-identify as "environmentalists," and it changed the way that environmental activists thought about community engagement. Kistler says, "It helped folks to see that there are other ways to engage people in caring for the river, besides picking up trash and cutting blackberry bushes."

⁵⁹ "Superfund info," Duwamish River Coalition Cleanup, <http://duwamish-cleanup.org/superfund-info/>.

Case Study 2

Perry Avenue Commons

Chicago, IL

Related to: demand, capacity, built environment, economies, water, waste, land, climate adaptation, energy

Despite record-breaking heat of 95 degrees, more than 300 community members and partners attended Sweet Water Foundation's Annual Harvest Celebration + Barn Raising to witness what is believed to be the first timber frame barn raised in the City of Chicago in more than a century. Photo Credit: Sweet Water Foundation

The South Side of Chicago is a predominantly African-American community that has suffered from decades of disinvestment and neglect, leading to high levels of poverty, unemployment, and crime. The neighborhood is populated by abandoned buildings and lots, which often remain vacant for years because developers can't calculate a "return on investment." The neighborhood has myriad environmental health challenges that correlate with poverty—lack access to healthy food, burdensome energy costs for low-income residents, un-remediated toxins in buildings and soil, and so on.

In 2014, artist and designer Emmanuel Pratt looked at his neighborhood and instead of a tangle of liabilities saw opportunity and underutilized assets. He began working with the community to build Perry Avenue Commons, a series of aquaponic farms, community gardens and art spaces utilizing the vacant lots and buildings and putting people to work.

Over the past three years, Perry Avenue Commons has grown to include more lots and houses, and is achieving a range of environmental, social, and economic benefits. The farm helps feed neighborhood residents and supplies Chicago's locavore restaurants, which have an insatiable demand for its produce. Its aquaponic systems are drought-resilient (enabling them to go up to three days without water), reduce summer heat effects in the neighborhood, prevent flooding, and generate renewable energy, which the farm sells back to the grid. With the revenue it generates it provides paying jobs to neighborhood residents who build and work on the farm and arts integrated, hands-on Science, Technology, Engineering and Math (STEM) education to neighborhood youth, many of whom are high school dropouts or face other barriers to employment. And now the property value of the site, which was deemed to have no return on investment (ROI) by developers, has increased exponentially. The project has reinvigorated a sense of community pride and agency, spurring a number of other improvement projects driven by residents.

Pratt credits the farm's artistic elements—murals, landscape design, traditional woodworking, festivals and performances, and culinary arts—with enabling Perry Avenue Commons to reach its environmental goals. Art creates a welcoming symbol of regeneration and care that draws residents to the site, changes how they relate to each other, and activates a sense of possibility and ownership. The beauty of the site also attracts public and private investments. Pratt says, "The second we activated the garden site through art and culture, not only did vandalism completely disappear, we became an international tourist destination point." It has been featured in museum exhibits at the Art Institute of Chicago and internationally, and its art world validation has made the City of Chicago more supportive. This positive attention to a neglected part of the city helps convince officials to allow activities that are not covered by existing zoning regulations.

The project is also demonstrating the potential of a new model for urban agriculture and community energy generation that can be replicated in other communities. The farm is providing data on its water and energy use to interested engineers worldwide. It is also working with Harvard Graduate School of Design and Massachusetts Institute of Technology (MIT) to develop new economic models for delivering on triple bottom line ROIs ("people, planet and profit"). Pratt is emphatic about the importance of art to the sustainability outcomes: "Art is key in helping shift perception and open people's minds to the possibilities of this change. And the artistic perspective is what helped us see that we could create something out of what was perceived to be 'nothing.'"

Case Study 3

The Fargo Project

Fargo, ND

Related to: demand, capacity, built environment, climate adaptation, water, land

Stream Restoration by Amu Production as part of
The Fargo Project: World Garden Commons.
Photo Credit: The Fargo Project, City of Fargo

The flooding of the Red River has long been an issue for the City of Fargo, North Dakota, and is exacerbated by climate change. Over the past several decades the city has built an extensive network of stormwater detention basins to protect the community from water overflows. However, this has created wide swaths of barren, ugly and unusable spaces that have physically separated neighborhoods and marred the city's landscape.

In 2009, the city began working with artist Jackie Brookner to see if there was a way that these basins might be made more functional from a social and aesthetic perspective. A pilot site was selected, an existing 18 acre basin that the team named World Garden Commons, as a place to test ideas. Brookner pulled together a team of local artists who used sandboxes, visualization techniques, poetry, storytelling, food sharing, and physical movement to engage residents in a multi-year process of re-imagining how the spaces could be used. These creative techniques “bring a different kind of imagination in,” says Brookner, and allow “more room for surprise and tapping into the whole person.”⁶⁰

Together, the residents—including Native Americans, Scandinavian-Americans, and refugees from Africa and other countries—began to imagine new possibilities for these spaces. In partnership with the city's planners and engineers, they designed a series of amenities that included sculptural features, a natural amphitheater, community gardens and festival spaces. The vision is for these vibrant public spaces to create new opportunities for social interactions, including among groups that have been physically or culturally isolated from each other. The process also helped the community reconnect to water as something that can be life-giving and life-enhancing, not simply terrifying.

Integrating stormwater management with living community spaces celebrates water as an essential part of Fargo's identity and culture.

The creative approach to the site has turned out to have some environmental and economic benefits as well. For example, the artists convinced the city to experiment with not mowing the fields in order to see what grew there. Not only was the natural landscape of native grasses aesthetically beautiful, but it turned out that this landscape naturally and efficiently managed invasive species, saving the city money and energy. The project also built new scientific knowledge on green infrastructure for the North Dakotan landscape, as Brookner engaged with North Dakota State University and City Engineering to try new approaches.

Fargo City Planner Nicole Crutchfield reflects that “By working with artists and using a creative problem-solving lens, we were able to find solutions that functioned on multiple levels—ecological, spiritual, infrastructural, and aesthetic. We picked up on nuances about what the community needed and what worked that we would have missed if we had approached it using our conventional planning methods.” Working this way was so successful that the city of Fargo has begun to use artist-led, community-based processes for other infrastructure projects as well. It believes so strongly in this approach that it has created a workbook to help other communities understand why working with artists can generate better solutions and how to do it effectively.⁶¹

⁶⁰ Rebecca Gross, “Our Town Spotlight on Fargo, North Dakota,” *National Endowment for the Arts Art Works Blog*, July 12, 2011, <https://www.arts.gov/art-works/2011/our-town-spotlight-fargo-north-dakota>.

⁶¹ Rachel Asleson PMP, Anna Cunningham, and Merrill Ingram PhD, *Integrating Artists and City Planning: The Fargo Project Lessons Learned* (The Fargo Project: 2015), <http://www.thefargoproject.com/wp-content/uploads/2017/08/IntegratingArtistsCityPlanningTheFargoProjectLessonsLearned.pdf>.

Case Study 4

Utah Diné Bikéyah

San Juan County, UT

Related to: demand, capacity, scale, economies, land, water, climate adaptation

San Juan County, Utah contains some of our country's most intact archaeological sites. This petroglyph panel is illuminated by the night sky. Photo credit: Maro Toso, courtesy of Utah Diné Bikéyah.

San Juan County in southeastern Utah is the poorest county in the state, with unemployment twice the rate of the rest of Utah and close to 30% of county residents living below the poverty line. Half of the county residents are Native American—Navajo, Ute Mountain Ute, Uinta Ouray Ute, Zuni and Hopi—many of whom live without electricity or running water. As a result, economic development is a constant concern, and most of the county’s plans advocate for selling land for natural gas extraction and uranium mining. Local residents are often faced with the “non-choice” of working in these dangerous industries or abject poverty.

However, while it is monetarily poor, the area is rich in natural beauty and cultural heritage, and these extractive economic development plans put this heritage at risk. In 2010 the area’s five tribes came together to form Utah Diné Bikéyah (UDB) to represent Native voices in the ongoing debate about land management and economic development. Through years of consultation with tribal leaders, other residents and county officials, it has drafted an ecologically centered economic development plan. Under this plan, Native people would steward the land and share the natural and cultural heritage of the area with others through arts and heritage tourism. This would allow them to maintain their traditional values and culture while earning a living and caring for the land.

In 2016 the planning that had been underway got a tangible opportunity. President Obama designated The Bears Ears—named for the distinguishing pair of red rock buttes that mark the area—a National Monument. The designation is unusual in that it explicitly recognizes the inseparability of the

cultural and ecological value of the area. It says that “The traditional ecological knowledge amassed by the Native Americans...is, itself, a resource to be protected and used in understanding and managing this landscape sustainably for generations to come.”⁶² This recognition of the “intangible heritage” that can only be carried by people as a resource to be protected by law is a first for the U.S. National Park Service, and critically significant. As Gavin Noyes, Executive Director of Utah Diné Bikéyah says, “You can’t separate culture from the landscapes where Native people collect herbs, hunt, carry out ceremonies.”

The status of the Monument is currently in flux as a result of action by the Trump administration to reduce its size and allow mining, a decision that is being challenged in courts.⁶³ However, the UDB plan has support from Native and non-Native communities who see its potential as a smart economic development strategy that allows them to preserve their way of life on the land. If the plan is successful, it could be a new model for how local land stewardship can provide economic value as a viable alternative to toxic extractive industries.

⁶² The White House, “Presidential Proclamation — Establishment of the Bears Ears National Monument,” December 28, 2016, <https://obamawhitehouse.archives.gov/the-press-office/2016/12/28/proclamation-establishment-bears-ears-national-monument>.

⁶³ Julie Turkewitz, “Trump Slashes Size of Bears Ears and Grand Staircase Monuments,” *New York Times*, December 4, 2017, <https://www.nytimes.com/2017/12/04/us/trump-bears-ears.html>.

Case Study 5

Water Bar & Public Studio

Minneapolis, MN

Related to: demand, capacity, scale, built environment, climate adaptation, water, land

Water Bar collaborates with Dakhóta Iápi Okhódakičhiye and Healing Place Collaborative to teach about Dakota language and relationships to water and place at Owámmi Falling Water Festival. Photo by Water Bar.

Minnesota is the location of the headwaters of the Mississippi River watershed, which drains into 31 states. This means that the need for smart and fair water management is key for the state's own communities, in addition to many others. There are long-standing tensions among different stakeholders in the state—like urban drinking water districts and rural agricultural producers—which are intensified by climate change, population growth and ideological differences. State government and environmental groups are struggling to increase public awareness of and commitment to responsible water stewardship, let alone bridge these deeper divides.

Water Bar was started by artists Colin Kloecker and Shanai Matteson as a way to engage people with water issues across geographical, social, and political divides. Matteson lives in Minneapolis but grew up in a small, conservative town at the headwaters, and knows first hand that trying to “educate” people about environmental issues using data and admonitions does not work. Matteson says, “especially in this politically contentious time, you have to meet people where they are, around what matters most to them.”

Instead of using the language of policy, science or advocacy, Water Bar is a free bar that invites people in with a sign out that says “water is all we have.” “Water Tenders,” made up of a rotating cast of public officials, ecologists, activists, artists, and community members, serve water from various sites around the state. The casual, playful atmosphere attracts a range of people, from the curious passer-by to the committed activist, and engenders conversations between people that would not normally interact. Topics range depending on who is in the room — from water pollution to usage rights to climate-change related issues—but the artistic construct and welcoming space creates a context for truly human connections, regardless of sector, geography, or views. Matteson says, “as artists we

can be ambiguous in a way that is fundamentally different from a government agency or an environmental group that has a specific agenda. It isn't that we don't have views, but we are not telling people what to think. It is ok if you have questions, or don't know where you stand on something, or don't agree.” In addition, because it is “play,” water tenders and patrons can break out of their official roles, often leading to new ideas or collaborations.

Cognitive scientists now confirm Matteson's intuition that getting people to connect with issues and each other on a personal and emotional level is how opinions and behavior are really shaped and changed. Water Bar, like many art experiences, meets people on the level of identity, values, vulnerabilities and emotions.

Water Bar is now a sought after resource and creative partner for civic and governmental organizations including the State Governor's office, the City of Minneapolis Office of Sustainability, environmental organizations, watershed districts, and others statewide as they look to raise public awareness and solve complex water challenges by working across sectors. Water Bar has also become a community hub for artists and community activists looking to form collaborations, and to develop new opportunities to work within broader water systems.

Case Study 6

Land Art Generator Initiative

Various Locations

Related to: demand, built environment, climate adaptation, energy, land

The Solar Hourglass by Santiago Muros Cortés, winner of the 2014 Land Art Generator Initiative Copenhagen design competition. Image courtesy of LAGI.

To completely shift off fossil fuels to renewable energy requires entirely new infrastructure. Most people do not have a concrete picture of what this vastly different world would look or feel like. Moreover, in many places, wind turbines and solar arrays are viewed as “visual pollution” and trigger active community resistance. Getting communities to accept and even demand renewable energy infrastructure is a challenge we must address in order to move the needle.

Renewable energy infrastructure is usually designed with one priority in mind: maximizing the kilowatt hours of energy produced. However, while this may lead to the best designs from a technological and economic perspective, artist Elizabeth Monoian and architect Robert Ferry argue that these specifications don’t matter if the infrastructure isn’t built. In 2008, they founded the Land Art Generator Initiative (LAGI) to prove that “renewable energy can be beautiful.” They see the enormous investment that the U.S. currently needs to make in renewable energy infrastructure as a massive opportunity both to solve our energy problems *while at the same time* making great public spaces. They envision a world where “the mass proliferation of clean energy systems will also lead to some of the 21st century’s greatest works of art and social projects.”

LAGI partners with cities around the world to run competitions for site-specific, large-scale public artworks that also generate energy. The competitions are open to all and regularly receive submissions from a wide range of entrants—from middle school students to teams of world-class engineers and artists. Because it is public art, people come up with designs that have benefits beyond energy efficiency. Community members act as reviewers and judges, and the process triggers lively public conversations about aesthetics, energy, public space and community identity. In some cases, the brief asks entrants to address other local environmental issues as well. For example, the 2016 Santa

Monica competition asked for solutions to the city’s drought and stormwater issues.

“By incorporating the best new technologies as media for new and bold works of contemporary art,” LAGI is “dispelling not-in-my-backyard (NIMBY) myths and showing that the solutions to climate change are something that all of us want to have,” says Monoian. LAGI is experiencing high demand from cities that are looking for ways to generate public interest in and support for clean energy.

Case Study 7

Re-locate Kivalina

Kivalina, AK

Related to: demand, capacity, built environment, climate adaptation, water, land



The Kivalina Biochar Reactor is the village's response to honeybuckets, an overflowing landfill, and declining public infrastructure budgets. Photo Credit: Re-locate Kivalina, Courtesy Michael Gerace

The Inupiaq in Kivalina, Alaska, are facing the imminent need to relocate their village. Traditionally semi-nomadic, the people of Kivalina were forcibly resettled by the U.S. Government onto a barrier island 100 years ago. The barrier island was ill-suited for habitation from the start, and the community has long advocated to relocate in order to access proper water and sanitation infrastructure, deal with overcrowding, find economic opportunity, and escape the erosion of their built environment. The coastal erosion is being accelerated by climate change, which compounds the effects of all of these issues and is increasing the urgency of relocation.

For decades, Kivalina has fought for relocation through the U.S. courts and political system. Yet despite many official studies confirming the necessity of relocation and government-generated plans to do so, there has been limited government authority and insufficient political will to allocate the resources needed to make relocation happen.

Re-Locate Kivalina is a team of artists, architects, environmental justice lawyers, anthropologists, and others working in partnership with community members to help them envision and create a plan for relocation that not only keeps the community physically safe, but also sustains their cultural traditions. One important piece of this is selecting locations for their new village development where Kivalina people can continue the cultural practices that support their particular way of life. The project also includes an online archive where the community is documenting and sharing the history of its fight for relocation and its ongoing navigation of colonial power and bureaucracies.

Now, in addition to working through the U.S. political system, Kivalina's relocation leaders are skillfully using media to attract global attention and allies. As a result, Kivalina has become "an international icon of climate-related displacement and change," according to participating artist Michael Gerace.

By making their process visible globally, Kivalina's approach to community led and culturally informed planning can be instructive for the growing number of frontline communities seeking their own creative solutions to addressing climate change's impacts in ways that protect their culture.

In partnership with Kivalina's relocation leaders, the Re-Locate project team is now working to find ways to unlock new resources for relocation, contribute to the global dialogue around climate-related displacement, and form global networks of allies to support Kivalina and other frontline communities. Current non-local allies of Kivalina include archive developers at the Center for Digital Archaeology (San Raphael, CA), geophysicists from Berkeley Lab (Berkeley, CA), and biochar reactor developers at Biomass Controls (Putnam, CT).

Case Study 8

Clear Creek Creative

Rockcastle County, KY

Related to: demand, capacity, economies, climate adaptation, energy, water, land, toxic pollution



Clear Creek Festival, Rockcastle
County, KY. Photo Credit: Melisa Cardona

The exodus of coal companies has caused widespread economic and social devastation in Appalachia. The rapid and near total loss of its primary employer, albeit one that caused significant health and environmental damage, has left the region facing the challenge of how to move forward and create a viable future. What to do next is not obvious or easy, especially in a community that has been so defined by its relationship with coal, and starkly divided between industry supporters and opponents.

Artists and organizers Bob Martin and Carrie Brunk moved full-time back home to Kentucky in 2011 in the midst of this transition. They took over producing the Clear Creek Festival, a community gathering around art, music, food, and storytelling in the foothills of Rockcastle County, KY. The festival was small in the beginning, but each year it attracted a wider range of people to come together around culture. By starting with something that everyone in the region had in common, regardless of political or ideological perspective, they hoped that people might be able to engage with one another and heal some of the long-standing divisions.

In 2014, they made this aspiration even more intentional. They began reaching out to local farmers, foragers, artists, builders, and others to collect stories about what the region means to its people. They turned these stories into a theater piece called “Land, Water, Food, Story,” performed by and for the community at that year’s festival, which also included a barn raising and a dinner with local cuisine. Brunk says that this “opened up an explicit and aspirational conversation within our community about our relationship to the land, about the preciousness of our good water, about our food and farms as a source of abundance, about the kind of community we live in and the future we are building.”⁶⁴

⁶⁴ <https://alternateroots.org/the-land-man-a-love-for/>

In the winter of that year, “land men” showed up in the region, hoping to buy land cheaply and sell it to energy companies for natural gas exploration, a well-worn strategy in economically poor but natural resource rich regions. Brunk says, “Whether they were drawing on the history of this region’s largely compliant relationship to extractive industries or whether they were just counting on people who mostly don’t have a lot of money being willing to do anything to get some, they figured it was a safe bet that many would just sign.”⁶⁵ But many in the community had just spent the last year talking about their relationship to the land and what they wanted for their future, and they knew that a new extractive industry was not what they wanted. Moreover, the trust and social networks that had been built allowed information about what was going on to spread quickly. The community created a plan of action and a network, Frack Free Foothills, to stay informed and organized.

Martin says, “The cultural and organizing work we and others had been doing prepared the ground for us to be able to respond to this threat.” He notes, “The community is becoming ever more resilient. It is a network that is able to respond to fracking, climate change, homophobia or whatever else might come our way.”

Clear Creek has also worked with Kentuckians for the Commonwealth (KTFC) and other environmental groups and organizers from around the region on a community driven plan for a just transition away from coal. They are using culture as a way to bring people to the table to plan for the future. Martin says working through culture provides “a way to look at the possibilities for our region from a perspective of abundance rather than of scarcity” and create an atmosphere that is “enlivened, engaged, hopeful.”

⁶⁵ Ibid.

Case Study 9

HighWaterLine

Miami, FL

Related to: demand, capacity, built environment, climate adaptation, water, land

Photocourtesy
of Eve Mosher,
HighWaterLine.

Climate change, sea level rise, and extreme flooding is an increasing problem for low-lying coastal areas. Infrastructure to address this issue will take time and resources to build, so public investments must be made now to prepare cities for what they will face in 5–10 years. However, political will to make these investments is limited, in part because of a lack of public interest in the issue, which feels abstract and distant from people’s everyday lives. As a result, political leaders lack the mandate to push for the significant investments that it will require.

HighWaterLine is a collaboration between artist-organizers Eve Mosher and Heidi Quante that aims to give residents of New York, Miami, the United Kingdom, and other vulnerable coastal areas a visceral experience of how climate change induced sea level rise and extreme flooding will impact their communities and a feeling of agency in addressing it. The artists engage with residents over a period of up to nine months, using artistic methods to translate and interpret scientific data in order to think about what climate change will mean for them and how they can respond. Participants then “perform” by drawing a blue line with a field line chalker around the perimeter of the city where the water is predicted to reach. This participatory performance draws attention and curiosity from passers-by, sparking a dialogue between participants and other community members. The performance provokes an “aha” moment for others, expanding the reach of the artistic engagement and providing a context for the community to talk to itself.

The artists continue working with the community after the performance to help them take the next steps to make the resilient community they envisioned during the project a reality. In Miami, a group of participants in the project were inspired to form *Resilient Miami*, a community-driven effort

to educate residents about the threat of climate change and to plan for and build resilience in Miami’s low-income and underserved communities.⁶⁶

⁶⁶ Resilient Miami, <http://www.urbanimpactlab.com/resilient-miami-1/>

Angelo Baca, Artist, Utah Diné Bikéyah
Dan Borelli, Artist, Illuminating Futures
Sophie Constantinou, Artist, Citizen Film / Green Streets
Nicole Crutchfield, Planning Administrator, City of Fargo / The Fargo Project
Ramon Cruz, International Policy Program, Institute for Transportation and Development Policy
Remy De la Peza, Director of Planning and Policy, Sustainable Little Tokyo
Katherine Gajewski, Former Philadelphia Sustainability Officer; Founder, City Scale
Michael Gerace, Artist, Re-locate Kivalina
Chip Giller, Founding CEO, Grist
Gregory Jenkins, Executive Director, Somerville Arts Council / ArtFarm for Social Innovation
Sarah Kavage and Nicole Kistler, Artists, Duwamish Revealed
Frances Lucerna, Artistic Director, El Puente
Mary Miss, Artist, FLOW: Can You See the River?
Jim Madden and Dede Taylor, Artists, Mountain Time Arts
Bob Martin, Artist, Clear Creek Festival
Shanai Matteson, Artist, Water Bar
Elizabeth Monoian and Robert Ferry, Founding Directors, Land Art Generator Initiative
Eve Mosher and Heidi Quante, Artist / organizers, HighWaterLine
Gavin Noyes, Executive Director, Utah Diné Bikéyah
Manuel Pastor, Director, USC Program for Environmental and Regional Equity (PERE)
Shelley Poticha, Director Urban Solutions Program, Natural Resources Defense Council
Emmanuel Pratt, Artist, Perry Ave Commons
Aviva Rahmani, Artist, Blued Trees Symphony
Judilee Reed, Program Director, Thriving Cultures, Surdna Foundation
Stephen Reilly, Associate Director, Environmental Coalition of South Seattle
Ellen Ryan, Senior Director Strategy and Planning, Fairmount Park Conservancy
Aiko Schaffer, Coordinator, Front and Centered
Neil Seldman, co-founder, Institute for Local Self Reliance
Lehua Simon, Artist, Mālamalama Maui
Nick Slie, Artist, Cry You One / Mondo Bizarro
Jen Sokolove, Program Director, Compton Foundation
Courtney Smith, Resilience Program Associate, Rockefeller Foundation
Jodie van Horn, Director, Ready for 100, Sierra Club
Clark Wilson, Office of Sustainable Communities, Environmental Protection Agency
Kate Wolford, President, McKnight Foundation
Elizabeth Yeampierre, Executive Director, UPROSE
Miya Yoshitani, Executive Director, Asian Pacific Environmental Network

In collaboration with Grist and Sierra Club, ArtPlace hosted a cross-sector Working Group in May 2017 that commented on an early draft of this document and identified opportunities for moving this work forward. Participants included:

Esmeralda Baltazar, Highlander Research & Education Center

Dan Borelli, Ashland-Nyanza Project: Illuminating Futures

Rob Bennett, EcoDistricts

Matthew Clarke, The Trust for Public Land

Nicole Crutchfield, City of Fargo, ND

Randy Engstrom, City of Seattle, WA

Danielle Mayorga, US Water Alliance

Katherine Gajewski, City Scale

Jihan Gearon, Black Mesa Water Coalition

Stephanie Gidigbi, Natural Resources Defense Council

Chip Giller, Grist

Lara Hansen, Ph.D. EcoAdapt

Sarah Kavage, Duwamish Revealed

Burt Lauderdale, Kentuckians for the Commonwealth

Robert Martin, Clear Creek Creative

Shanai Matteson, Water Bar & Public Studio

Elizabeth Monoian, Land Art Generator Initiative

Sudha Nandagopal, City of Seattle, WA

Emmanuel Pratt, Perry Ave Commons

Senator Rebecca Saldaña, Washington State Senate

Alvaro Sanchez, The Greenlining Institute

Andrew Simon, Grist

Rachel Shiozaki, Sierra Club

Amelia Urry, Grist

Clark Wilson, US Environmental Protection Agency

Jonah Yellowman, Utah Diné Bikéyah

ArtPlace America

Jamie Bennett

Sarah Calderon

Lyz Crane

Jamie Hand

Adam Erickson

Sarah Westlake

Helicon Collaborative

Alexis Frasz

Holly Sidford

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