



BUILDING ALLIANCES FOR CLIMATE ACTION

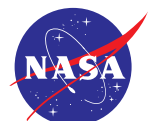
ADVANCING CLIMATE ACTION THROUGH PARTNERSHIPS



Resilient Nation Partnership Network



FEMA





A MESSAGE FROM THE RESILIENT NATION PARTNERSHIP NETWORK

The impacts of climate change are happening across the country and affecting all parts of our lives. NASA has observed global temperature increases, shrinking ice sheets, increases in greenhouse gases, and more. NOAA reported the U.S. experienced 310 weather and climate disasters that exceeded \$1 billion in damage and costs since 1980. Of those, 56 occurred in the last 3 years. More and more evidence has been presented. Climate change is here, and we must address this challenge.

We have the incredible opportunity to take action and become a climate-resilient nation. After all, we have no choice. To become climate resilient requires collective action. Our efforts must take a Whole-of-Government and Whole Community approach.

The [Resilient Nation Partnership Network](#) is working to address this through partnership. The result of our collective action is this *Building Alliances for Climate Action* resource. It is the work of many organizations and individuals, including federal representatives, faith leaders, community-based organizations, mayors and many more. At a time when many are searching for direction on how to address the climate crisis, this resource represents a unifying voice, helping guide the Whole Community forward.

Building Alliances for Climate Action is more than a resource. It tells a story of a future that is hopeful and bright. The only way we achieve that future is together.



Resilient Nation
Partnership Network



FOREWORD

In October 2021, the Resilient Nation Partnership Network (RNPN) held its sixth annual Partnership Forum titled *Alliances for Climate Action* co-hosted in partnership with FEMA and NASA. *Alliances for Climate Action* proved to be one of the largest federally hosted climate events in recent years.

Over 4 weeks, 37 speakers shared their perspectives and paths forward toward bolstering collective climate action. Over 3,000 viewers representing more than 900 organizations participated as part of this incredibly important conversation.

For our second installment of the “Building Alliances” series, we partnered to develop a resource that captures the insights, takeaways and voices that are helping lead the charge against climate change. Working with our diverse speakers from the *Alliances for Climate Action* Forum, we are proud to release this resource.

We thank you for your ongoing support and dedication. More than ever, Whole Community partnerships, like yours, will be critical in creating more resilient communities for present and future generations.

SEN. BILL NELSON, NASA Administrator

DEANNE CRISWELL, FEMA Administrator

“
OUR DECISIONS WILL DETERMINE THE FATE OF PLANET EARTH, SO LET’S PROTECT IT. LET’S ACT QUITE BOLDLY, AND LET’S ACT WITH URGENCY. LET’S PRESERVE IT FOR NOT ONLY US, BUT FOR THE GENERATIONS THAT FOLLOW.
”

“
TO MEET THIS MOMENT, WE NEED TO INVEST IN INITIATIVES TO BREAK THE CYCLES OF DISASTER, DAMAGE AND RECONSTRUCTION. OUR ACTIONS NOW WILL DIRECTLY IMPACT THE FUTURE. IN THE PAST, FEMA WAS CRITICIZED FOR INSUFFICIENT ACTION ON CLIMATE CHANGE. THIS WILL NOT BE OUR FUTURE.
”



ACKNOWLEDGEMENTS

The RNPN, FEMA and NASA would like to thank our partners who have contributed their time and perspectives in developing this guide. We would especially like to thank the individuals below for their time and generosity (in order of appearance in this resource):

*Ko Barrett, Senior Advisor for Climate, NOAA, Vice-Chair,
Intergovernmental Panel on Climate Change*

Dr. Gavin Schmidt, Director, Goddard Institute for Space Studies, NASA

Mayor Satya Rhodes-Conway, Madison, Wisconsin

*Marcus T. Coleman Jr., Director,
DHS Center for Faith-Based and Neighborhood Partnerships, FEMA*

Dr. Alan Kwok, Northern California Grantmakers/Philanthropy California

Commissioner Dennis Knobloch, Former Mayor, Valmeyer, Illinois

Dr. Pablo Mendez Lazaro, University of Puerto Rico

Mellisa Maktuayaq Johnson, Inupiaq, Nome Eskimo Community Tribal Member

Rt. Rev. Cathleen Bascom, The Episcopal Diocese of Kansas

**THANK YOU TO ALL OF
THOSE WHO HELPED US
COLLABORATE ON THIS FOR
AN INCREDIBLE SIXTH YEAR
OF KNOWLEDGE SHARING!**

Additionally, thank you to the 37 incredible individuals who spoke at the *Alliances for Climate Action* Partnership Forum. Each one of you played a crucial role in creating this guide. Your unique perspectives, insights and personal stories guide us in tackling climate action. Speaker contacts are at the end of this document. We encourage you to reach out and get to know them. Start a conversation and see where it goes. Our individual actions can go a long way.

The views expressed herein are those of the individual contributors and may not represent the views of the U.S. government. Nothing herein should be construed as an endorsement of any non-government entities, organizations or service, or as a formal statement of guidance or policy position of FEMA or other U.S. government entities.



TABLE OF CONTENTS

INTRODUCTION	1
2021 IMPACT DASHBOARD	2
PARTNER PERSPECTIVES	3
The Climate Action Movement Is Picking up Speed.	
Why Joining Now Is More Important Than Ever!	3
Ensuring Climate Data Are Accessible and Useful to Diverse End Users.....	5
Keys to Advancing Climate Resilience Policy at the Local Level.....	6
How Climate Action Will Require Partnership Across the Whole Community.....	8
CLIMATE CONSIDERATIONS.....	10
INSIGHTS AND REFLECTIONS	11
Our Future Vision.....	11
Climate Migration	12
Diverse Lenses of Climate Action and Advocacy.....	13
Financing Climate Action	14
Building for the Future.....	15
STORIES OF RESILIENCE.....	16
Love and Community: Two Essential Pieces of Climate Resilience	16
The Day the Piano Went Up the Hill.....	18
Discover Puerto Rico, The ‘Shining Star’ – Enjoy Powerful Hurricanes, Frequent Droughts and Long-Lasting Blackouts.....	20
Sila Allannuqtuq (The Weather is Changing)	22
We Are of Green Stuff Woven: Transformative Faith for Grasslands and Globe.....	23
RESOURCES	26
CONTACT INFORMATION.....	33
CLOSING	35



INTRODUCTION

We all have a stake in creating a more equitable and resilient nation. None of us can do it alone. Since 2015, the [Resilient Nation Partnership Network](#) has broken down barriers and built connections between diverse organizations and professionals across all sectors. Every year, our actions get bigger, bolder and more far-reaching in support of three central priorities:

- **Promoting natural hazard mitigation and climate adaptation actions.**
- **Advancing equitable resilience initiatives.**
- **Expanding capacity through partnerships.**

Around the U.S., partners lead incredible missions to protect our communities from the growing impacts of climate change. This resource offers a glimpse of what is happening nationwide; we hope it inspires further discussion and collaboration across this incredible network of minds and beyond.



Resilient Nation
Partnership Network

ALLIANCES FOR CLIMATE ACTION FORUM

IMPACT DASHBOARD

2,664

REGISTRANTS



37

SPEAKERS
REPRESENTING
30 ORGANIZATIONS



MORE THAN
900 ORGANIZATIONS
REPRESENTED



5M IMPRESSIONS ACROSS SOCIAL CHANNELS



15,422

WEBSITE VIEWS



6,542

UNIQUE
WEBSITE USERS

(October 1-31)

3,250

TOTAL
VIEWERS



OCTOBER 13

MOST ACTIVE
WEEK ON
SOCIAL MEDIA

ATTENDEE BREAKDOWN

FEDERAL GOVERNMENT: **40%**
NONPROFITS: **13%**
PRIVATE SECTOR: **13%**
STATE/LOCAL/TRIBAL GOVERNMENT: **11%**
ACADEMIA: **10%**
ASSOCIATIONS & OTHER: **7%**
INDEPENDENT/CONSULTANT: **6%**



SOCIAL MEDIA ADVOCATES

- ARISE-US NETWORK
- ASSOCIATION OF STATE FLOODPLAIN MANAGERS
- NATIONAL GOVERNORS ASSOCIATION
- NATURAL HAZARDS CENTER
- RESILIENT VIRGINIA
- U.S. CHAMBER OF COMMERCE FOUNDATION

286

POSTS
ON
SOCIAL

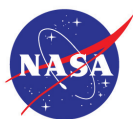


206

NUMBER OF TIMES
#RESILIENTNATION
WAS USED ON
SOCIAL MEDIA



FEMA





PARTNER PERSPECTIVES

THE CLIMATE ACTION MOVEMENT IS PICKING UP SPEED. WHY JOINING NOW IS MORE IMPORTANT THAN EVER!

Ko Barrett, Senior Advisor for Climate, NOAA, Vice-Chair, Intergovernmental Panel on Climate Change

Climate change is no longer an abstract eventuality, but one we see manifest in our daily lives. Depending on where you live, you may have already experienced hotter temperatures, destructive floods, more extreme hurricanes or prolonged droughts.

As a science communicator, I realize the enormity of climate change can be so overwhelming it can freeze people into inaction. Given that humans are primarily responsible for our warming world, and the window to forestall the worst impacts is closing quickly, feeling despair is understandable. It douses motivation. But the realities are indisputable, as illustrated in the August report of the Intergovernmental Panel on Climate Change (IPCC).

The IPCC found the earth has already warmed about 1.1°C above pre-industrial times, with every decade bringing more record-breaking temperatures. This is an undeniable and alarming trend that, if continued on its current trajectory, threatens to raise the risk of severe climate impacts across the planet. Still, achieving the global goal of limiting warming to 1.5°C is possible if we enact rapid, large-scale reductions in the emissions of all greenhouse gases and reach net zero CO₂ emissions by mid-century.

These findings underscore the urgency to act now, decisively and collectively. Action breeds hope, and taking action is an effective antidote to despair, especially when there are clear positives and limiting warming is an achievable goal. This is not the time to tune out.

We can examine our lifestyles to see where we can lower our carbon footprint. At the same time, we must push for transformational societal action that accelerates our ability to mitigate and adapt to climate change, by engaging, for example, in initiatives that make our communities ready for and resilient to climate change.

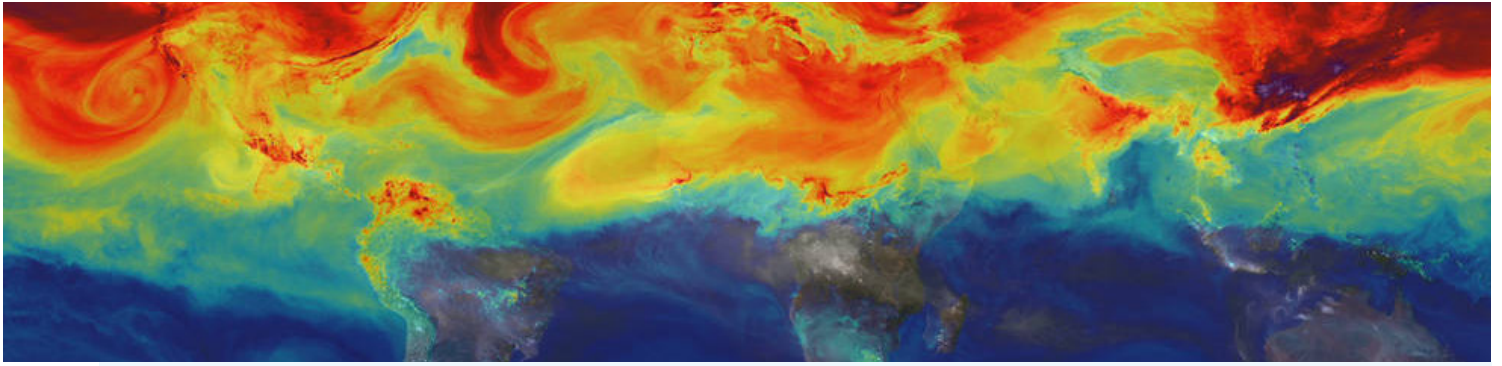
I've been working on climate change for over 20 years. Today, I can tell you that we have real reasons for hope and a unique opportunity to take meaningful action:

- We have more confidence in the science of climate change than ever before.
- We have a groundswell of concern and strong support for science-driven action on climate change and an unprecedented opportunity to rethink jobs and infrastructure.
- We are hearing more clearly the voices of students, Indigenous Peoples and all segments of civil society. Their voices match and spur on the commitments made by national and local governments and those in the private sector.

This last point is particularly important. The inclusion of more voices in the climate conversation is proving transformational at home and internationally. That is no surprise. Research shows that, to solve complex problems, engaging a diverse group of minds, viewpoints and experiences leads to more innovative solutions. Our climate challenges are undoubtedly complex. But the more momentum we build for climate action, the healthier our lives and all life on our planet will be. Individually, we can take action. Collectively, we can make a difference.

To learn more about the IPCC and its reports, please visit ipcc.ch. To learn more about the science of climate change and what we can do, please visit NOAA's climate.gov.





ENSURING CLIMATE DATA ARE ACCESSIBLE AND USEFUL TO DIVERSE END USERS

Dr. Gavin Schmidt, Director, Goddard Institute for Space Studies, NASA

The amount of relevant data on past climate change, current conditions and future projections available from federal government sources is vast. Unfortunately, it is spread over hundreds of websites, from multiple agencies, with diverse and often incompatible formats, and in practice is often undiscoverable unless the user already knows exactly what they are looking for. Furthermore, much of the data that are the easiest to find are often out of date or obsolete. This data landscape has arisen from many individual decisions that were sensible at the time, but have not aged well as the need for integrated, up-to-date information has become more acute.

There is some benefit in focusing this effort on time scales relevant to climate-related investment decisions so that it can be divorced from analogous systems for real-time, weather or emergency-related applications where timeliness is the most important factor. Over longer time scales, coherence, completeness and credibility are more valuable. The nature of climate projections is quite different from weather forecasts both in terms of driving scenarios and uncertainties, and new tools and approaches will be needed to successfully have them be used to enhance climate resilience.

In building a data ecosystem to promote greater climate resilience, we will need to greatly improve the accessibility of the relevant data. The principles that should direct our efforts should include:

1. greater discoverability of relevant data;
2. investment in information brokers — people and systems that can guide users to the most appropriate data and usage and sustain the inclusion of that data within decision-making systems;
3. better standards for data formatting and integration, perhaps through a big push of data and model output to various cloud systems, and the use of more general tools to output needed information in user-configurable ways; and
4. development of open science platforms that will allow for multiple stakeholders to work with the underlying data to produce sector- or location- or risk- or population-specific results.

These principles should be driven by the need to serve and work with populations and sectors that have not engaged with this kind of data previously and thus can enhance environmental justice goals, too.

KEYS TO ADVANCING CLIMATE RESILIENCE POLICY AT THE LOCAL LEVEL

Mayor Satya Rhodes-Conway, *Madison, Wisconsin*



Set ambitious, science-based goals for climate resilience. Just like a comprehensive plan provides direction for a community's development, climate goals are the cornerstone of climate resilience planning and action. Clear goals for reducing greenhouse gas emissions, transitioning to clean energy, and equitably reducing vulnerability to climate stressors like flooding and heat waves, for example, are important touchstones that guide actions at the local level.

The city of Madison has committed to 100% renewable energy for city operations by 2030 and 100% renewable energy and net-zero carbon emissions community-wide by 2050. Climate goals like these provide the foundation for policies, programs and projects and are essential for tracking progress toward improved resilience. They also signal to residents, the business community and surrounding cities and towns that your municipality is serious about taking action, creating opportunities for collaboration and growing the local green economy.



Embed climate resilience into all aspects of your work. Whether it's providing quality, affordable housing, expanding public transit, ensuring equitable access to green space or supporting small business innovation, all of the work of local government can be designed to provide a climate win.

Making climate resilience a shared priority across departments and divisions empowers elected officials and municipal staff to think creatively, spurring the innovation and collaboration necessary to achieve rapid and lasting transformation of your community. It also opens the door to leverage multiple streams of funding for climate resilience work. When Madison's new bus rapid transit system comes online in 2024, it will not only expand access to low-cost, reliable transportation; it will also help Madison meet its climate goals by using zero-emissions electric buses.



Prioritize resilience benefits for communities at the forefront of climate change. Climate stressors are not equally or fairly distributed across people and communities. Those at the forefront of climate change face a larger burden and may be left out of the benefits from policies and programs aimed at climate resilience due to the cumulative effects of current and past racial, social, environmental and economic inequities.

Ensuring all residents can thrive in a changing climate requires that local governments do the hard work of understanding climate inequities in their own backyards, centering the voices of individuals and neighborhoods experiencing climate inequity, and collaboratively creating and implementing policies specifically designed to benefit these

communities. Madison is collaborating with local nonprofit partners to pilot programs that provide solar and energy efficiency upgrades to multi-family rental housing, making these cost-saving, clean energy solutions more equitable and accessible.



Connect with other local governments to learn what is working and join forces.

Action on climate has been blossoming at the local level, even when state and federal leadership is limited. Sharing success stories, aligning priorities and working together to leverage resources is a powerful strategy for advancing and scaling up climate resilience policies and their impacts, especially when local government neighbors work together.

There are several national-scale organizations that convene and support local climate leaders, and there are great models for starting collaborations with your neighbors. Madison, along with Dane County, convenes the Sustainability Leaders Collaborative, a group of elected leaders and staff from Dane County municipalities that share information and lessons learned on solar installation, green fleets and more.



Create an inclusive vision where everyone can do their part. Addressing the climate crisis can feel like an insurmountable task, one so big that many either despair or discount the role of individuals and local government. Both result in inaction.

Leading climate resilience policies emphasize the importance of collective action and the big changes that happen when we all come together to do what is within our power. For example, Madison is engaging with building owners, operators, energy service experts and more to create policies and programs that advance collective action to improve energy efficiency in commercial buildings and increase resilience community-wide.





HOW CLIMATE ACTION WILL REQUIRE PARTNERSHIP ACROSS THE WHOLE COMMUNITY

Marcus T. Coleman Jr., *Director, DHS Center for Faith-Based and Neighborhood Partnerships, FEMA*

Supporting the mission of the Federal Emergency Management Agency and learning from crisis leaders from Sweden to Japan to Reserve, Louisiana, I have seen what is possible when there is a tangible and actionable commitment to unlocking the full potential of partnerships that address disparities exacerbated by climate change. This includes investing in a Whole Community approach to disaster operations that affirms the importance of neighbors helping neighbors. While there are longer term consequences of climate change that we must plan for, it pays to be smart about how we approach partnering to advance equity and support historically underserved populations in the here and now.

If we choose to invest in partnerships that advance equity and support historically underserved communities in existing emergency management systems, we build the social capital necessary to take actions that address the impacts of climate change. Without this approach, we leave our neighbors and our communities susceptible to experiencing compounding inequities in times of crisis. Climate change demands urgency to getting it right. In a report titled [Human Cost of Disasters](#) from the United Nations Office for Disaster Risk Reduction, we get a glimpse of the scope and scale of human suffering: “Between 2000 and 2019, there were 510,837 deaths and 3.9 billion people affected by 6,681 climate-related disasters. This compares with 3,656 climate-related events which accounted for 995,330 deaths (47% due to drought/famine) and 3.2 billion affected in the period 1980-1999.”

We have an opportunity to learn from one another through acting on **F.A.I.T.H.** (Fellowship, Appreciative Inquiry, Integrative Thinking, Transparency and Humility) in our efforts to strengthen climate resilience.

For all proposed solutions, we must continue to build on opportunities that not only institute good mitigation practices, but also promote opportunities for **fellowship** in our communities. A great example of this is the Community Forms project in Denver that cleverly merged public art, play space and stormwater mitigation.

Maintaining a posture of **appreciative inquiry** also helps strengthen our ability to take a Whole Community approach toward climate action. Appreciative inquiry applies five principles to search for the best in people, their organizations, and the strengths-filled, opportunity-rich world around them. When one takes this approach, it's possible to unlock partnerships in mitigation like the one between Knox County and the Knoxville National Association for the Advancement of Colored People described in Effectively Expanding Community Engagement.

Sustaining partnerships focused on climate action increases our ability to apply **integrative thinking**, which the author Roger Martin defines in *I-Think* as, “the ability to face constructively the tension of opposing ideas and, instead of choosing one at the expense of the other, generate a creative resolution of the tension in the form of a new idea that contains elements of the opposing ideas but is superior to each.” This can also be seen in the Community Forms example and its ability to Connect Mitigation to Arts and Culture.

As stated by Chauncia Willis, CEO of the Institute for Diversity and Inclusion in Emergency Management, in Building Alliances for Equitable Resilience, at the foundation of partnerships are commitments to **transparency** and **humility**. Approaching partnerships with transparency and humility in taking climate action, “requires understanding that everyone is not starting in the same place, everyone doesn't have access to the same resources, and everyone doesn't have the same life experiences. Therefore, one solution cannot address everyone's needs.”

If we embrace the pursuit of partnerships that value fellowship, appreciative inquiry, integrative thinking, transparency and humility we expand our collective opportunity to act on F.A.I.T.H. in collaboration with people and organizations necessary to ensure our actions to mitigate the impacts of climate change serve everyone in the most equitable manner possible.

For more information on the DHS Center for Faith-Based and Neighborhood Partnerships please visit <https://www.fema.gov> or contact partnerships@fema.dhs.gov.



CLIMATE CONSIDERATIONS

How can professionals promote effective climate action?

Center all climate change actions on equity and community resilience. For many marginalized groups, history informs current challenges. Climate change worsens existing inequities.

Deliver actions that address multiple climate impacts while respecting community resources.

Move from siloed, one-off efforts to inclusive planning projects that span the Whole Community. Scalable and replicable approaches to resilience can address the growing impacts of climate change. If measures can't be replicated, they won't have the global impact we desperately need.

Address climate change by recognizing that the future won't look like the past. Our cities, buildings and ways of life are changing. Actions to plan, implement or adapt must consider future uncertainties.

Integrate artists, designers and culture bearers into climate action strategies. Local, creative voices are uniquely equipped to provide access to new channels of communication and engagement. They know best the challenges within their community and their novel approaches gain local support for climate action.

Right size climate modeling in smaller jurisdictions, Tribal lands, territories or localities to account for their unique geography, history or position.

Research resource distribution at global and local levels. Use this knowledge to improve adaptive capacity for states, localities, Tribes and territories.

Look beyond structures when designing climate-ready infrastructure. Ask what community services the infrastructure supports and consider the role of social infrastructure.

INSIGHTS AND REFLECTIONS

Our featured partners provided climate action insights across financial, social impact, managed retreat, infrastructure and more.

OUR FUTURE VISION

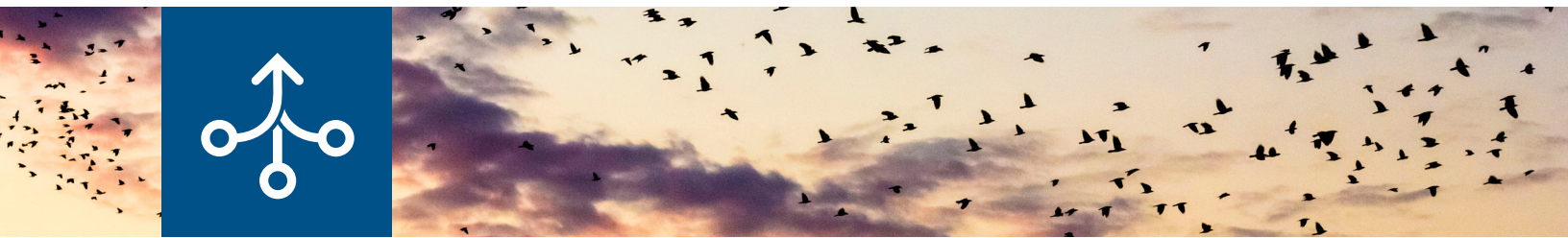
Leaders from the private, public and academic sectors discussed how we lead climate action through partnerships and shared missions. Tackling the impacts of climate change requires a massive, unified effort.

- **Investors, insurers and rating agencies are focusing on climate risk and data.** Building climate risk into investment analysis can drive corporate and governmental decarbonization and fund climate resilience work. Positioning U.S. climate projects as viable and innovative opens doors to global capital.
- **Rally together to scale tools, update resources and approach technical assistance.** Update existing models and modes of working to ensure that all members of a community benefit, particularly ones disproportionately affected by chronic disinvestment and racist policies. Bring affected parties, experts and partners together to rally around a shared asset (like an infrastructure or safety project) and seek funding for localized projects that build resilience.
- **Information is power.** Local insights and data combined with the ability to communicate climate risks, solutions and opportunities can guide decisions we all make.
- **Diverse perspectives help solve complex problems.** Partnerships with diverse backgrounds and expertise generate more innovative solutions that work for a greater number of people.
- **Transformational change happens at the local level.** Federal policy needs to be adaptable; diverse communities and landscapes have many different needs. Data must be relevant and easily available. When we localize the impacts of climate change, we increase people's will and skill to act. Monitoring, evaluation and feedback loops help determine whether our actions, policies and programs make a difference. They also help local governments better target and adjust their efforts and investments.
- **Disaster recovery is a chance to boost resilience.** When a community is damaged by a natural hazard, we can reconstruct buildings using efficient, low- or no-carbon technologies and build back to higher standards to ensure we meet future resilience needs.

CONTRIBUTORS:

Madison, Wisconsin; NASA; NOAA; The Lightsmith Group;

The U.S. House of Representatives Select Committee on the Climate Crisis



CLIMATE MIGRATION

Leaders from academia and federal, state and local agencies discussed climate migration and community presence. How do we purposefully, equitably move people and structures away from risk? Planning and preparing for the growing impacts of climate change on people and communities is more important than ever.

- **Process matters.** Communities often fear that relocation may be involuntary. To guide decisions and investments, migration should be community-led. It should be voluntary and effective. The language used must be clear.
- **There is both a climate and a housing crisis.** If the request is to build to higher standards, federal, state and local governments need to connect the dots between housing and climate. It is not just about buyouts. We need to figure out what outcomes we want climate migration to achieve. We need to hold thoughtful and purposeful conversations about how we support community relocation rather than homeowner relocation.
- **A Whole-of-Government approach is necessary to address past and existing inequities that put people at risk.** Government at all levels must actively work to address inequitable practices and policies that have magnified the risk to disadvantaged communities. This involves focusing on how to move low- and moderate-income residents out of harm's way or better mitigate their risk if they choose to stay where they are. From an integrated perspective, we can think about ways to invest in nature-based solutions that bring amenities to areas that see less investment. Affordable housing must be in safe locations.
- **Resources cannot be simply scaled to meet the problem in every community.** Communities have the knowledge to know what is in their best interest; federal programs need to be flexible in their implementation. A coordinated funding approach from all sectors is needed. Opportunities must focus on inclusive, local partnerships, as well as local capacity and innovation for coordination. This will ensure that community visions and criteria make it into local planning and development.

CONTRIBUTORS:

Monroe County, Florida; Natural Resources Defense Council; University of Delaware; FEMA; U.S. Department of Housing and Urban Development



DIVERSE LENSES OF CLIMATE ACTION AND ADVOCACY

Resilience is for the Whole Community. Leaders across climate advocacy, academia, faith-based and Tribal groups, artistic and education communities, and others discuss the unique roles everyone serves.

- **No one can fix climate change by themselves.** Diverse partnerships help create solutions that are equitable and represent the needs of the Whole Community.
- **Empower people to become community and citizen scientists to help us understand how climate change affects individuals and communities.** Inequitable planning and land use decisions have had negative effects on the physical and mental health of disadvantaged communities. When their expertise is included, their investment and knowledge create favorable outcomes for the Whole Community.
- **Community-based organizations and faith-based organizations must be involved to ensure projects address environmental and climate justice challenges.** This helps combat misinformation and communities may have greater trust when they are involved throughout every step of the process.
- **Equity should lead the process.** Thoughtful consideration of climate and equity at project kickoff ensures they're not afterthoughts.
- **Understand the past to act in the present and plan for the future.** Whether it is data collection, land use or any other climate change issue, be sure to know which groups and communities have been systemically excluded. Then work to correct those systems. Research, planning and engagement need to include voices from the Whole Community to create accurate models and equitable solutions.
- **Make climate change issues human and relatable to wide audiences.** Artists, Tribal members and cultural leaders can communicate complex information on issues like climate change to adults and the next generation. They engage communities through storytelling or various media. Arts and cultural experiences can connect with our humanity and inspire action on pressing issues like climate change and equity.

CONTRIBUTORS:

Arizona State University; University of Colorado-Boulder Cooperative Institute for Research in Environmental Sciences; NASA; National Endowment for the Arts; The Earth Institute at Columbia University



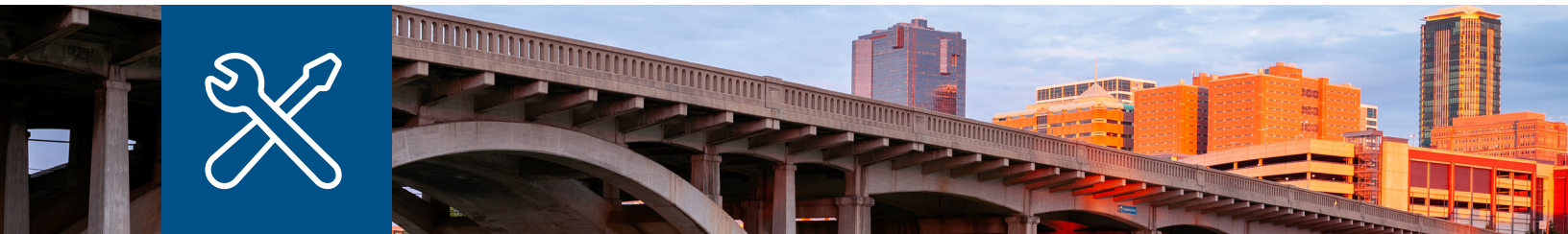
FINANCING CLIMATE ACTION

Building safer, healthier and more resilient communities depends on making climate-ready investments accessible. Nonprofit, community and private leaders discuss how to leverage financial investments to achieve Whole Community resilience and rethink systems that exclude vulnerable populations.

- **Climate change impacts disadvantaged communities the most.** Yet, these communities are not experiencing equitable investments to adapt and prepare for climate change. Public and private investments must include and recognize Whole Community needs. For example, [Justice40](#) is a Whole-of-Government effort to ensure that federal agencies work with states and local communities to deliver at least 40% of the overall benefits from federal investments in climate and clean energy to disadvantaged communities.
- **Creative financing options help reach those most disadvantaged.** For example, community development financial institutions (CDFIs) in the United States move capital to low- and middle-income borrowers in rural, urban and Tribal communities that traditional financing networks cannot easily serve.
- **Create equitable processes.** Equitable, holistic resilience is rooted in a process that fully engages affected communities, particularly communities of color, Native communities and those that are under-resourced. CDFIs, for example, are embedded in, and accountable to, the communities they serve. They are well-positioned to understand and further community needs, values and goals.
- **Community self-determination helps create equitable outcomes.** In our projects, we must ensure that communities have the resources they need to plan for their own future and act on that plan. Leveraging diverse vehicles to obtain financing is a critical step for action.
- **Redefine success to include the values of the Whole Community.** Success is often defined by money, prestige or fame. Broaden that definition to include preserving communities' cultural landmarks and values.

CONTRIBUTORS:

Gulf Coast Center for Law and Policy; Northern California Grantmakers/Philanthropy California; Opportunity Finance Network



BUILDING FOR THE FUTURE

Building climate-ready infrastructure requires forward-looking, Whole Community approaches and an understanding of how to work with nature, not against it. Speakers discuss what infrastructure means and how to work better with state, local, Tribal and territorial partners:

- **Critical infrastructure is more than pumps, pipes and bridges.** It includes those who need social, welfare and societal services, like transit for the elderly, the disabled and those with health conditions, for example.
- **Most infrastructure is nearing or beyond its useful life.** New forward-looking approaches, materials and technologies can ensure our infrastructure will withstand or quickly recover from future hazards.
- **We cannot build our way to climate resilience.** Disaster costs and impacts are getting worse. We cannot continue our current approach to development in areas with a high risk of climate impacts. We must harmonize the built, natural and social environments. Building to stronger standards is not the only solution.
- **A Whole-of-Government approach is crucial.** Every level of government must inclusively increase resilience through a Whole Community lens.
- **Leaders who represent the Whole Community need a seat at the table.** This helps the federal, state and local governments understand the infrastructure needs of all constituents, including disadvantaged communities.
- **Investment in infrastructure should equal the investment in the adaptive capacity of this country.** Accounting for future risk when deciding where and how we invest in infrastructure helps ensure a more sustainable tomorrow for communities. The resilience of the built environment to future risks is only one piece of a much bigger puzzle.

CONTRIBUTORS:

American Society of Civil Engineers; Built Environment Coalition; U.S. Department of Transportation; Houston Advanced Research Center; The Pew Charitable Trusts



STORIES OF RESILIENCE

LOVE AND COMMUNITY: TWO ESSENTIAL PIECES OF CLIMATE RESILIENCE

Dr. Alan Kwok, Northern California Grantmakers/Philanthropy California

The passing of bell hooks, whose many works include the book “All About Love: New Visions,” reminds us that all social change requires love. As she once said, “The vision of love is transformative, that challenges us in both our private and civic lives. I see the Civil Rights Movement as a great movement for social justice that is rooted in love. And it politicizes the notion of love that says real love will change you.”

Love is an action. Love challenges us to do better, to right the wrongs of the past, and to create a future where each person can fulfill their greatest potential and be free from harm.

In communities across the U.S. and around the world, we witness institutional policies and programs in public and private sectors that marginalize certain people and communities. We deny their voices that speak against unfair systems and processes. We blind ourselves to their knowledge and experiences that challenge our assumptions and ways of doing things.

These policies and programs affect people and communities every day, and the results are felt more acutely in the face of climate change. Data show that climate change disproportionately affects Black, Indigenous and People of Color (BIPOC) communities, and that our current ways of reducing climate hazard risks and mitigating their impacts are perpetuating racial and socioeconomic inequities, making these communities more vulnerable to future climate change risks and impacts.

This is where love and community come in. Each of us must use our relational, political and financial power to create systems and processes that affirm the dignity, voices and experiences of those who have been silenced. To stay true to those values, our road to climate resilience must be guided by the following actions:

- 1.** Listen to and be guided by our frontline communities. People and communities closest to climate change risks and impacts are most attuned to issues around risk reduction, disaster relief and recovery gaps. They are also the best positioned to design and implement climate change solutions.
- 2.** Critically examine existing systems and processes that marginalize certain people and communities. For example, are members of marginalized communities represented in climate and disaster resilience planning? Are they compensated for their time and expertise, or do we need to standardize that practice?
- 3.** Embed a justice lens in climate resilience. We need to ensure that climate actions advance the socioeconomic well-being of marginalized communities, and that resources are equitably allocated to people and communities that need them most.

The pursuit of climate resilience requires us to engage the imagination and the will to create a society where everyone is free from harm. We are at a juncture in the climate emergency. This moment requires all of us — the Whole Community — to act collectively in a manner that is rooted in love.





THE DAY THE PIANO WENT UP THE HILL

Commissioner Dennis M. Knobloch, *Former Mayor, Valmeyer, Illinois*

Valmeyer is in southern Illinois, about 35 miles southeast of St. Louis. The town was built near a towering river bluff, about 4 miles from the Mississippi River. In the late 1960s, I heard stories about World War II in my high school history class. Even though that happened less than 25 years earlier, I considered it “ancient” history. That is how it was with flooding, too. I had never stood in floodwater myself, so Valmeyer’s flooding in the 1940s seemed like “ancient” history to me.

A series of floods hit Valmeyer in the 1940s. People used boats to travel on Main Street. Graduation was canceled in 1943, with Valmeyer High School grounds under 3 feet of water. When the water receded, residents shoveled out the mud, scrubbed the walls, and moved back in. The Mississippi had other ideas; it flooded again in 1944 and 1947. This was more than the residents and farmers could handle. They rallied their elected representatives, and the U.S. Army Corps of Engineers had built a 35-mile-long earthen levee by 1950. It protected the county’s entire 60,000-acre floodplain. The Corps touted the levee as one of the best it had ever built. For many years, it protected Valmeyer.

By the early 1980s, my wife and I settled in Valmeyer to raise our three children. About that time, FEMA rolled into town with a fresh set of flood maps. Adopting the maps would let us all purchase flood insurance, but it would also bring some major restrictions. Any new buildings in Valmeyer would have to be at least 1 foot above the base flood elevation. On average, that would put new buildings 10 feet above the ground. That meant the end of growth in this community.

I was amused to note, the new maps showed that water from a 100-year flood would cover first base on our park’s baseball diamond, but not third base. How ridiculous! I was not shy about telling anyone from FEMA what I thought about their maps. Our levee had protected the area since 1950, and we had no reason to think that would change. A village committee tried to overturn these regulations, but we did not make much progress. In 1989, I ran for mayor to help lead the battle against FEMA and the floodplain regulations. I was elected to my second term in April 1993.

At that time, river levels were higher than normal, but we had no immediate concern. In June, that changed. A weather front stalled, and it rained, day after day. River levels rose, and by July, we started to fight the Mississippi River in earnest. Our firehouse was converted to a Flood Command Center. Every day before work, residents would stop by the FCC to check on the river level and the levee’s status. A group of retirees came by each morning for a daily dose of information and fresh coffee. I had total faith in our levee system. I was sure that before long, the river and our lives would return to normal. There was no reason to leave town, or even pack up. My feet were dry, and they would stay that way.

One morning I told the coffee group about a battle brewing in my house. Several years earlier, we had purchased a new piano. It was the centerpiece of our living room. Every day, my wife reminded me that she did not want anything to happen to this beautiful piano. She felt that if floodwaters came, I would be too busy to save it. I told her that we were still protected by that well-built levee, and our piano would stay dry. I wanted all our residents to stay positive and fight hard to beat the rising river. If they saw the mayor packing his things and hauling them to higher ground, that could be devastating. Every day, I would tell them, “The piano is still in our living room, and that’s where it’s going to stay.”

On July 25, the Mississippi was 16.5 feet over flood stage nearby, and sand boils were concerning. Some surrounding towns called for evacuation, and we wondered if we should do the same. That afternoon, we issued a voluntary evacuation order. We told residents that it would make sense to pack valuables and furniture and move them to higher ground. We still had no concern about the levee, but why not safeguard our cherished possessions? In a matter of minutes, my wife called the Command Center. Friends with trucks had just arrived at our house to help us move our possessions. I told her no, but she insisted. They removed several truckloads of furniture from our home that day. The next morning, when our coffee drinkers rolled in, they asked me about the piano, as usual. I looked at them and said, “Sorry, but yesterday, the piano went up the hill.” They walked out the door and went home to pack.

By August 1, the river was 19.5 feet over flood stage. It began to overtop a levee about 10 miles north of town. By August 2, water started rolling into Valmeyer. It took three days to fill the 60,000-acre river basin. By August 4, our town had water up to 16 feet deep, with swift currents and large floating debris. Much of the town was underwater for over 2 months. We found later that more than 90% of our structures were substantially damaged. And that park on the east side of town? First base was under water, and third base was dry. FEMA representatives were quick to call that to my attention.

As a community, we met in a nearby town. Many people said they never wanted to be part of this type of disaster again. A local planner suggested that we move the town. Many citizens felt this was a crazy idea, but it might be the only way to save Valmeyer. We decided to do some research. We eventually discussed the idea in a series of meetings. Most of our residents said they would support the move. In weeks, we brought more than 100 residents to the table. We gave them the task of planning their new town. We identified a plot of land about 1.5 miles from the former location and, more importantly, 400 feet higher. In less than 2 months, we completed a preliminary plan for moving Valmeyer to higher ground. One week later, I testified before Congress about our plans. Looking for support, I knocked on doors in Washington and in our state capital, Springfield. By December 1993 – about 4 months after the flood – state and federal officials helped break ground for the new town.

However, our plans would fail if we could not get buyout funds for our flooded properties. By mid-1994, we secured the necessary funding to install utility systems at the new site, funding for buying out our old properties, and funding to demolish them and return the site to green space. By the end of 1995, residents began moving into their new homes. Much of the relocation was completed the next year.

Many students in Valmeyer schools now regard stories of the 1993 flood as “ancient history.” I hope that this and future generations will study history and learn from the experiences of their ancestors. Moving Valmeyer to higher ground was not easy, and recovery took longer than expected, but we saved the town and increased our population. Looking back, we feel we made the right decision. One thing is for certain...when Valmeyer residents hear a knock at their door today, they don’t have to worry that it’s their destructive and uncontrollable former neighbor — the Mississippi River.



DISCOVER PUERTO RICO, THE ‘SHINING STAR’ – ENJOY POWERFUL HURRICANES, FREQUENT DROUGHTS AND LONG-LASTING BLACKOUTS

Dr. Pablo Mendez Lazaro, Associate Professor at the Department of Environmental Health, University of Puerto Rico

Climate extreme events are increasing in “intensity-duration-frequency” due to human-influenced climate change, and there is an increased potential for impacts due to the location of people, urbanization and critical infrastructures. Traditionally underserved communities in the Caribbean and island territories are systematically excluded from welfare, education and other societal services and benefits that help sustain good quality of life and well-being conditions. In August 2015, the U.S. Department of Agriculture (USDA) declared drought disaster in Puerto Rico. Since then and all subsequent years, we have been experiencing in Puerto Rico slightly dry weather and water imbalance coupled with aged infrastructure, obsolete reservoirs full of sediment, unable to capture and store water compromising population needs.

In September 2017, the U.S. Caribbean Territories (Puerto Rico and the U.S. Virgin Islands) suffered one of the most catastrophic hurricane seasons in recent history. Puerto Rico experienced major disruptions in essential services (e.g., potable water and electric power, telecommunications) and environmental health issues (e.g., water sanitation, contaminant exposure, vector-borne diseases, food hygiene and exposure to mold). Thousands of people died in the aftermath of Hurricane Maria.

Energy interruption occurs very frequently island-wide after Hurricane Maria, leaving thousands of residents (the elderly, people with pre-existing health conditions and disabilities) without electricity.

These experienced extreme events, droughts and powerful hurricanes are interacting with the institutional/environmental context of the island and the social determinants of health. For instance, the government of Puerto Rico declared bankruptcy in spring 2017, impacting all essential services (including budget cutoff in education, energy/water infrastructure, emergency preparedness and response). According to the Fourth National Climate Assessment for the Caribbean Region, “High levels of exposure and sensitivity to risk in the U.S. Caribbean region are compounded by a low level of adaptive capacity, due in part to the high costs of mitigation and adaptation measures relative to the region’s gross domestic product.”

In this context, extreme events in Puerto Rico joined with marginalization, absence of government climate actions, financial and political crisis, and inefficient governance promoted actions to advance social transformation and an uprising in community-based organizations that are pursuing sustainable development. With so many crises over the island, multiple communities are developing adaptive resilience, triggered by external/internal forces like the ones mentioned above.

We have been working with many community-based organizations to co-design long-term sustainable solutions and resources to the community members with a structured problem-solving participatory process, culminating in a sustainable action plan. These plans are based on the science SETS (socioecological and technological systems) and priorities for disaster risk reduction.

As an example, Corporación de Servicios de Salud, El Otao (COSSAO) is a community-based organization located in the municipality of Utuado (rural agricultural region) with 7,000 inhabitants with high rates of unemployment, elderly communities, lack of opportunities, young adults’ migration, etc. However, they have an extraordinarily strong leadership and capacity to start working on adaptive resilience. This organization, with a network of support composed of universities, foundations, state and federal agencies, is leading socioeconomic development and social transformation in rural communities of Puerto Rico. Now every day, they are promoting public health, providing healthcare access and agrotourism initiatives in underserved communities. We strongly believe communities in Puerto Rico have the potential to improve climate adaptation and mitigation actions by fostering stronger collaborations.



SILA ALLANNUQTUQ (THE WEATHER IS CHANGING)

Mellisa Maktuayaq Johnson, *Inupiaq, Nome Eskimo Community Tribal Member*

Growing up and being raised in Sitnasuak (a.k.a. Nome, Alaska) with my Inupiaq maternal grandparents, the conversation of climate change and any impacts weren't directly spoken of. It was always indirect teachings. Though living in an urban setting, my family lived a semi-nomadic lifestyle. Right after school let out each spring, we spent moments at our different camps and harvested, gathered, hunted and processed different foods, depending on the time of year and what was available. Our Elders taught us to take what we needed and, if it wasn't available, to shift to something else. Reflecting on my upbringing and what we were taught, it was apparent the values that were shared among our family members were also mirrored in our Tribes.

As Tribal members of Nome Eskimo Community, we as Tribal members work together to communicate with others when and where to obtain our foods. We share the ecosystem changes, what is occurring with our food sources, such as lack of fat or balding in those foods, and if there were any odd behaviors. We also work together in sharing weather patterns or what to expect each season.

Today, in the time of our dependence on modernized technology, we still practice some of our ways to adapt with and to our changing environment. We continue to only harvest what is needed and do not over-harvest any food sources from the land, sea and air. We continue to seek guidance and direction from our Elders. As Tribal members and leaders in our Tribal governments, we are working to mentor, educate and share the knowledge with our youth so that they will be the leaders. Also, we continue to uplift those who are in tough leadership roles, such as Tribal members, in working to share Indigenous knowledge about how the climate is always changing and ways we adapt to it.



WE ARE OF GREEN STUFF WOVEN: TRANSFORMATIVE FAITH FOR GRASSLANDS AND GLOBE

A poem by Rt. Rev. Cathleen Bascom, *Episcopal Bishop of Kansas*

My Motivation for Climate Action

Is a Grasslands Story.

It Is a Global Story.

It Is a Spiritual Story.

A Grasslands Story

Although I Was Born and Raised In Denver, Colorado and The Rocky Mountains, I Was Always Drawn to The Great Plains Which Fell Away to The East. I Am Sure I Was Imbued With Denver's Environmentally Sensitive Outlooks and Policies... But It is in The Grasslands That Stretch Between The Rockies and The Great Lakes That My Climate Action Is Truly Rooted. One Set of My Grandparents Were Wheat Farmers Who Had Survived The Dust Bowl. Nine Years of Black Skies But No Rain And The Tales of Surviving on Weeds Called Lamb's Quarters Lived Large in Their Legend. Climate Adaptation. Climate Resilience.

In-Between, I Lived in England...and Chicago... But in The 1990's, as A Young Episcopal Priest I Returned To Kansas, To The Flint Hills. Heading West On I-70, Beyond Topeka, The Road Steadily Rises... You Ascend One Grass-Covered Step, Then Another Into The Vestige Of A Sea Of Grass.

Now Only Three Percent of The Original Tallgrass Prairie Remains But A Remnant Ribbon of It Stretches in Panoramic Proportions. Sporadically Grazed But, Due To Shelves of Recalcitrant Limestone, Seldom if Ever has it been Plowed. A Sea of Grasses and Forbs That Come Upon You In Waves: At Shin Level, Sideoats Grama and Daisy Fleabane Knee-To-Hip-High Wading Pools of Wine-Tipped Little Bluestem Bergamot, Liatris, Beebalm, And Goldenrod... Indian Grass Plumes Shoulder-High And Big Bluestem Above Your Head. Extraordinarily, Only One-Third of These Plants Are Above Ground!

Their Drought and Fire-Resistant Roots Stretch in Complex Systems At Least Eight Feet Underneath, Teeming With Organisms. In Those First Days, I Simply Loved the Beauty and Biodiversity Of The Prairie.

It Took a Major **Flood-Event** To Make Me See the Prairie and Its Value For Climate Justice Clearly. In 2008, I Was Dean of The Episcopal Cathedral In Downtown Des Moines, Iowa. Des Moines Had Been Devasted by A Flood In 1993, And With Record-Breaking Snows And Large Rainfalls The City and County Prepared Themselves.

This was my first introduction to FEMA. Faith leaders were invited into the mix of civic and national leaders. While the assets of downtown Des Moines survived a levee was compromised flooding many low-income residents; a few of Des Moines' most racially diverse neighborhoods with devastating results. People with no flood insurance, little means to rebuild. The man whose home we rebuilt, died of mold-induced respiratory illness.

The faith communities provided shelter and legal counsel and building teams. But for me, my love of tallgrass prairie became forever wedded with a call for economic and racial justice. Climate change undeniably lies behind the flood events of Iowa, but so does the loss of grasslands. In Iowa, only 1/1000th of the original tallgrass prairie remains. In less than two generations the deep-rooted prairie plants that in Kansas survive drought and at the same time in Iowa absorb huge snowfalls and rain... have all been pulled out for short-rooted corn, soybeans and, of course, parking lots. State laws about buffers wiped away

to increase profit, and farmers tilling in order to plant every inch of their fields... the water flows downstream to the cities where the least-resourced people often suffer.

What I now crucially understand is that maintaining grasslands is among the most cost-effective and scalable solutions for mitigating climate change! Prairie-scape is well-known for its ability to absorb and store carbon in roots and soil.

But we must act; the World Wildlife Fund very recently released a report showing that the Great Plains lost over 2.5 million acres of grassland last year!

Both in Iowa and in Kansas we have been leveraging both church lands and the private land of Episcopalians to plant pocket prairies and larger legacy prairies. To create a network of creation care sites where sustainable practices are taught and cells of activism can organize around local environmental issues.



II. Global Story

It Was Just After The 2008 Iowa Flood Event That My Story Gets Global. The Episcopal Church is Part of The Worldwide Anglican Communion It is A Network, A Community...And I Began to Meet Others: A Woman Dean of A Cathedral In Venezuela Shared With Me About Flooding and Drought There Due To the Devastation Of Native Landscape... First-Nations Episcopalians in Alaska Losing Sacred Ground and Livelihoods To Rising Sea Levels. We Are a Community, Network Of Sacred Storytellers Joined By Tales of Water and Suffering. Understanding The Global Impact, People Of Many Faiths Must Act. We Too Are Organizing. I Will Participate as Part Of Presiding Bishop Michael Curry's Delegation to the UN Climate Summit CoP26. Anglicans From South Africa and Taiwan And Panama They Too Are Attending CoP26 Praying...Taking Climate Action...Engaged in Advocacy.

III. Spiritual Story

Scientist Gus Speth, Founder of The World Resource Institute Wrote:

"I Used to Think That The Top Environmental Problems Were Biodiversity Loss, Ecosystem Collapse And Climate Change. I Thought That Thirty Years Of Good Science Could Address These Problems. I Was Wrong...The Top Environmental Problems Are Selfishness, Greed and Apathy, And To Deal With Those We Need A Cultural And Spiritual Transformation."

Joint Appeal Signed October 4th, 2021, By Muslim, Jewish, Buddhist, Christian, Hindu, Taoist, Jain, Faith Leaders states:

"We Have Inherited A Garden, We Must Not Leave A Desert To Our Children."

In September, Pope Francis, The Archbishop of Canterbury Justin Welby, and Eastern Orthodox Ecumenical Patriarch Bartholomew I Made This Statement:

"We Call On Everyone, Whatever Their Belief Or Worldview, To Endeavour To Listen To The Cry Of The Earth And Of People Who Are Poor, Examining Their Behaviour And Pledging Meaningful Sacrifices For The Sake Of The Earth Which God Has Given Us."

Around The Globe, Small Bands of Eco-Activists – People Like You! – Are Working to Save One Reef, One Rain Forest, One River at A Time. And Some Are Trying to Save The Ever-Shrinking Remnants of Tall Grass Prairie.

I Have Written a Novel – *Of Green Stuff Woven* – To Portray This Work.

The Title is from *Leaves of Grass* Where Walt Whitman Writes: *We Are of Hopeful Green Stuff Woven.*

For Jews and Christians, In the first Chapter of the Sacred Text Of Genesis God Intends a Reality In Which Humans and Nature Are Discovering, In Collaboration What They Can Become.

In Christian Teaching, via Augustine: *We Are Not Fully Human Without The Natural Order, And Creation Is Not What It Is Intended To Be Without Humanity.*

Chief Seattle said It This Way: *Whatever Befalls The Earth, Befalls The Sons And Daughters Of The Earth. We Did Not Weave The Web Of Life, We Are Merely A Strand In It. Whatever We Do To The Web, We Do To Ourselves*

Spiritual People, Many Faiths, Are Ready to Be Allies For Climate Action For The Sake of The Grasslands The Global Community And The Creator of All Things.



RESOURCES

Our diverse Forum speakers shared some resources that inspire collective approaches to help you tackle climate action.

ADAPTATION

[Adapt Alaska Tool Database](#) | *Adapt Alaska*

This website includes materials and expertise to encourage learning, sharing and building resilience to climate change.

[Adaptation Clearinghouse](#) | *Georgetown Climate Center*

Adaptation Clearinghouse is an online database and networking site that serves policymakers and others working to help communities adapt to climate change.

[Adaptation Planning Tools](#) | *Environmental Protection Agency (EPA)*

EPA staff have developed tools to help communities anticipate, plan for and adapt to the changing climate.

[Adaptation Workbook](#) | *USDA*

The Adaptation Workbook is a structured process to consider the potential effects of climate change, as well as design land management and conservation actions that help prepare for changing conditions.

[Caribbean Regional Climate Sub Hub Assessment of Climate Change Vulnerability and Adaptation and Mitigation Strategies](#) | *USDA International Institute of Tropical Forestry*

The Caribbean Climate Hub is working to reduce climate change risk to the agriculture and forestry sectors.

[Climate Adaptation Science Centers](#) | *U.S. Geological Survey (USGS)*

The USGS National and Regional Climate Adaptation Science Centers (CASCs) connect scientists with natural and cultural resource managers and local communities to help fish, wildlife, water, land and people adapt to a changing climate.

[State Adaptation Progress Tracker](#) | *Georgetown Climate Center*

States and communities around the country are preparing for climate change. This planning process typically results in a document called an adaptation plan. The State Adaptation Progress Tracker includes a map highlighting the status of state adaptation efforts.

[State Energy Efficiency Scorecard](#) | *American Council for an Energy-Efficient Economy*

The 2020 State Energy Efficiency Scorecard analyzes the energy efficiency efforts of all 50 U.S. states and Washington, D.C. It tracks their policies and programs to reduce energy use, like adopting or advancing energy-saving targets, vehicle rules or appliance standards.

CLIMATE CHANGE

[2022 Sea Level Rise Technical Report](#) | NOAA

The Sea Level Rise Technical Report provides the most up-to-date sea level rise projections available for all U.S. states and territories; decision-makers will look to it for information.

[Climate.gov](#) | NOAA

Climate.gov provides timely, authoritative scientific information about climate science, adaptation and mitigation.

[Climate.NASA.gov](#) | NASA

NASA is a world leader in climate studies and Earth science. While its role is not to set climate policy or prescribe particular responses or solutions to climate change, its purview does include providing the robust scientific data needed to understand climate change. NASA then makes this information available to the global community – the public, policy- and decision-makers and scientific and planning agencies around the world.

[Climate Change Resources](#) | *Union of Concerned Scientists*

These resources and perspectives are designed to help meet the challenges presented by climate change.

[Climate Change 2022: Impacts, Adaptation and Vulnerability](#) | IPCC

The Working Group II contribution to the IPCC Sixth Assessment Report assesses the impacts of climate change, looking at ecosystems, biodiversity and human communities at global and regional levels. It also reviews vulnerabilities and the capacities and limits of the natural world and human societies to adapt to climate change.

[Climate Change 2022: Mitigation of Climate Change](#) | IPCC

The Working Group III report provides an updated global assessment of climate change mitigation progress and pledges, and examines the sources of global emissions. It explains developments in emission reduction and mitigation efforts, assessing the impact of national climate pledges in relation to long-term emissions goals.

[Climate Change Resource Center \(CCRC\)](#) | USDA – Forest Service

The CCRC is a web-based, national platform that gives land managers and decision makers information to address climate change in natural resources planning and management.

[Climate Hubs](#) | USDA

The Climate Hubs and their partners support the USDA's Climate Adaptation and Resilience Plan linking science and practice. They also conduct tailored outreach activities.

[Earth Observatory: Fires](#) | NASA

The Earth Observatory: Fires tool is a collection of current fire imagery and information about NASA's activity related to these natural disasters.

[Fourth National Climate Assessment \(NCA4\)](#) | USGCRP

NCA4 Volume II draws on the foundational science described in Volume I the Climate Science Special Report. Volume II focuses on the human welfare, societal and environmental elements of climate change and variability for 10 regions and 18 national topics.

[Global Climate Change: Vital Signs of the Planet](#) | NASA

Global Climate Change: Vital Signs of the Planet is meant to provide the public with accurate, timely information about Earth's changing climate. It includes current data and visualizations.

[Gulf South for a Green New Deal](#) | *Gulf South for a Green New Deal*

Gulf South for a Green New Deal (#GulfSouth4GND) is a regional formation of more than 200 organizations advancing long-existing work towards climate, racial and economic justice in five states across the Gulf South: Texas, Louisiana, Mississippi, Alabama, Florida.

[National Centers for Environmental Information \(NCEI\)](#) | NOAA

NCEI data help businesses and organizations across sectors operate more efficiently, safely, environmentally and economically.

[National Risk Index for Natural Hazards](#) | FEMA

The National Risk Index is an online mapping application from FEMA that identifies communities most at risk to 18 natural hazards. This application visualizes natural hazard risk metrics and includes data about expected annual losses from natural hazards, social vulnerability and community resilience.

[Regional Climate Centers \(RCCs\)](#) | NOAA

RCCs provide efficient, user-driven services that cover three important categories: developing sector-specific and value-added data products and services; establishing robust, efficient digital infrastructure for providing climate information; and seamless integration and storage of non-NOAA climate data with traditional NOAA data sources.

[Regional Integrated Sciences and Assessments \(RISA\)](#) | NOAA

The RISA Program supports research projects that address climate-sensitive issues for regional decision makers and policy planners. There are 11 RISA teams across the country. NOAA climate data with NOAA data sources.

[Resilience Science Information Network \(RESIN\)](#) | *Houston Advanced Research Center*

The RESIN brings together climate indicators to help communities create performance-focused resilience plans to address future climate conditions.

[Sea Level Projection Tool](#) | NASA

This online dashboard builds off data from the UN's Intergovernmental Panel on Climate Change (IPCC) recent report. The tool allows users to visualize and project sea level on global and regional scales from 2020-2150.

[Sea Level Evaluation and Assessment \(SEA\) Tool](#) | NASA

The SEA Tool provides data for assessing sea level change and its causes. The tool provides assessments of past, present and future change, and to demonstrate the improved science capabilities in observing sea level changes.

[United States Climate Action Network \(USCAN\)](#) | USCAN

USCAN is a vital network for 190+ organizations active on climate change.

[U.S. Climate Resilience Toolkit](#) | USGCRP

The U.S. Climate Resilience Toolkit is a website to help people find and use tools, information and subject matter expertise to build climate resilience. It offers information from across the U.S. federal government in one location.

[U.S. State Climate Action Plans](#) | *Center for Climate and Energy Solutions*

This site includes information about the 34 states with a climate action plan or that are revising or developing one. This includes 28 states that have released plans, four states that are updating their plans, and two states that are developing a plan.



EMPOWERING LOCAL RESILIENCE

[The CLEAR Toolkit](#) | *Catalyst Miami*

In this toolkit, Catalyst Miami shares its strategy, successes and lessons learned from the CLEAR Miami program. Other communities can use this information to create similar climate resilience leadership programs.

[HUD Community Resilience Toolkit](#) | *U.S. Department of Housing and Urban Development (HUD)*

The HUD Community Resilience Toolkit guides recipients of HUD Community Planning and Development (CPD) funds to identify ways to use their funds to mitigate natural hazards.

[ICLEI Network](#) | *International Council for Local Environmental Initiatives (ICLEI)*

ICLEI is the first and largest global network of local governments devoted to solving the world's most intractable sustainability challenges.

[LEED for Cities and Communities](#) |

U.S. Green Building Council

As of March 1, 2021, 120 cities and communities have been certified through LEED. Browse the current list of certified projects, or explore certified projects in the [USGBC project directory](#).

[Mitigation Matters: Policy Solutions to Reduce Local Flood Risk](#) | *The Pew Charitable Trusts*

This research examines 13 states or cities that have adopted successful flood mitigation measures. As local and state officials around the country search for proactive, cost-effective solutions to prepare for the threat of flooding, this research offers options organized into three categories: using existing funds for mitigation; creating revenue sources; and establishing smarter regulations.

[StoryMap: NASA and Groundwork Map Climate Vulnerability](#) | *Groundwork USA*

In 2019, NASA DEVELOP worked with Groundwork USA's Climate Safe Neighborhoods to analyze heat and flooding in two Groundwork cities: Elizabeth, New Jersey, and Providence, Rhode Island. This StoryMap presents the project's results.



EQUITY

[CONNECT+ Forums: Building Equitable Resilience](#) | [Opportunity Finance Network](#)

This event was designed for practitioners, investors, funders and other stakeholders interested in expanding their knowledge of resilient community development finance, engaging with peers, and discussing opportunities, strategies and common challenges.

[EJScreen](#) | [EPA](#)

To better meet the agency's responsibility to protect public health and the environment, the EPA has developed a new environmental justice mapping and screening tool called EJSscreen. It is based on national data and combines environmental and demographic indicators in maps and reports.

[Equitable and Just National Climate Platform](#) | [The Equitable and Just National Climate Platform](#)

The Equitable and Just National Climate Platform advances the goals of economic, racial, climate and environmental justice to improve the public health and well-being of all communities, while tackling the climate crisis.

[Indigenous Peoples and Climate Justice in the Arctic](#) | [Georgetown University](#)

Several Georgetown researchers studied what climate justice means for Indigenous communities in the Arctic. The article looks at land use and land dispossession and maps them to United Nations and U.S. treaty obligations.

[Puerto Rico's State of the Climate 2010-2013: Assessing Puerto Rico's Social-Ecological Vulnerabilities in a Changing Climate](#) | [Puerto Rico Climate Change Council \(PRCCC\)](#)

In response to changes in climate, the PRCCC met in November 2010 to assess Puerto Rico's vulnerabilities and recommend strategies.

[Ruta hacia la Resiliencia: Guía de Estrategias para la Adaptación al Cambio Climático en Puerto Rico](#) | [PRCCC](#)

This resiliency-focused guide presents adaptation strategies and actions to help stakeholders in Puerto Rico increase their resiliency and enable their adaptation to climate change.



FINANCING

[A People's Orientation to a Regenerative Economy](#) | *Climate Justice Alliance*

A People's Orientation to a Regenerative Economy offers community groups, policy advocates and policymakers a pathway to solutions that work for frontline communities and workers.

[BlueGreen Alliance](#) | *BlueGreen Alliance*

The BlueGreen Alliance unites labor unions and environmental organizations to solve today's environmental challenges in ways that create and maintain quality jobs and build a clean, thriving and equitable economy.

[Investing at the Frontlines of Climate Change: A Funder Toolkit on Climate, Health and Equity](#) | *Health and Environmental Funders Network (and project partners)*

This toolkit was created to boost philanthropy at the intersection of climate change, health and equity.

[Report on Climate-Related Financial Risk 2021](#) | *The Financial Stability Oversight Council*

The Financial Stability Oversight Council, chaired by Treasury Secretary Janet Yellen, outlined climate-related financial risk in a fall report.

[Scaling Equitable Solar Finance](#) | *Carsey School of Public Policy, University of New Hampshire*

Drawing from literature on multiple dimensions of low-income solar finance and interviews with key figures in the field, Eric Hangen, Rebecca Regan and Sarah Boege recommend public investments and policy changes to help scale equitable solar finance.

[Treasury Announces Fossil Fuel Energy Guidance for Multilateral Development Banks \(MDBs\)](#) | *U.S. Department of the Treasury*

The Fossil Fuel Energy Guidance for MDBs calls to assess options for clean energy, innovation and energy efficiency, and to only consider fossil fuels if less carbon-intensive options are unfeasible.

MANAGED RETREAT AND CLIMATE MIGRATION

[A Climate Migration Pilot Program Could Enhance the Nation's Resilience and Reduce Federal Fiscal Exposure](#) | *Government Accountability Office (GAO)*

This resource details GAO's recommendations for Congress to consider establishing a federally led pilot program to help communities interested in relocation.

[Climate Change and Displacement in U.S. Communities](#) | *EcoAdapt*

A survey of displacement practitioners considering the impacts of climate change that seeks to identify emerging practices and policies that address the dual goals of reducing climate risks and displacement pressures.

[Climate Change and Displacement in the U.S. – A Review of the Literature](#) | *Urban Displacement Project*

A review of literature to understand the intersections between climate change and displacement, intended to be a resource for practitioners and policy makers.

[Floodplain Buyouts: Challenges, Practices, and Lessons Learned](#) | *The Nature Conservancy & Disaster Research Center*

This report draws on case studies and interviews to understand why buyout programs are challenging and how administrators have dealt with challenges.

[Managed Retreat Conference](#) | *Columbia University*

The presentations from the second Columbia University conference on managed retreat are available as a YouTube playlist.

NATURE-BASED SOLUTIONS

[Gulf TREE](#) | *The Northern Gulf of Mexico Sentinel Site Cooperative, the Gulf of Mexico Alliance Resilience Team, and the Gulf of Mexico Climate Resilience Community of Practice*

Gulf TREE helps guide natural resource managers and community planners in climate tool selection.

[International Guidelines on Natural and Nature-Based Features for Flood Risk Management](#) | *U.S. Army Corps of Engineers (USACE)*

The recently published USACE-led International Guidelines on the Use of Natural and Nature-Based Features for Flood Risk Management represent the current state of the science on conceptualizing, planning, designing, engineering, implementing and maintaining natural and nature-based feature projects.

[Nature-Based Solutions](#) | *FEMA*

FEMA's Nature-Based Solutions website offers information, planning resources, funding resources and more that promote sustainable planning, design, environmental management and engineering practices.

SOCIAL RESILIENCE

[Green New Deal Superstudio Curated Projects](#) | *The Green New Deal Superstudio (Landscape Architecture Foundation; Weitzman School of Design McHarg Center at the University of Pennsylvania; Center for Resilient Cities and Landscapes at Columbia University; American Society of Landscape Architects; and Council of Educators in Landscape Architecture)*

The Green New Deal Superstudio was an open call for designs to reflect the principles and policy ideas of a national climate plan like the Green New Deal. These designs included landscapes, buildings, infrastructures and public works agendas.

[Faithful Resilience: A 6-Part Guide to Building Spiritual, Physical, and Social Climate Resilience in Your Faith Community](#) | *Creation Justice Ministries*

The Faithful Resilience series teaches congregations about action on climate resilience. It offers theological reflections for sermons or bible study, reflection questions, actions churches can take, and ways churches are building resilience in their community.

[Farther, Faster, Together: How Arts and Culture Can Accelerate Environmental Progress](#) | *Helicon Collaborative, Commissioned by ArtPlace*

This field scan identifies how place-based arts and culture interventions (or creative placemaking) can advance sustainability in a community.



CONTACT INFORMATION

Our collaborators' contact information is provided below. Please get in touch with them. The names below are linked to email addresses. If you missed the dialogues at the *Alliances for Climate Action* Forum, a video of each day's proceedings is linked below. Building relationships and learning from one another is the foundation of our collective success!

6TH ANNUAL FORUM RECORDINGS

[Our Future Vision](#)

[When Climate Moves Communities](#)

[Stories That Inspire Change](#)

[Financing Climate Action](#)

[ZELALEM ADEFRIS](#)

Vice President of Policy and Advocacy
Catalyst Miami

[RT. REV. CATHLEEN BASCOM](#)

Tenth Bishop
The Episcopal Diocese of Kansas

[DR. BATTINTO BATTS](#)

Dean, Walter Cronkite School of
Journalism and Mass Communication
Arizona State University

[DR. CHRISTIAN BRANEON](#)

Co-Director, Environmental Justice
and Climate Just Cities Network
The Earth Institute

[MARCUS T. COLEMAN JR.](#)

Director
DHS Center for Faith-Based
and Neighborhood Partnerships, FEMA

[BRADLEY DEAN](#)

Communications &
Partnerships Specialist, FEMA

[LAURIAN FARRELL](#)

Regional Director, North America
Resilient Cities Network

[RHONDA HAAG](#)

Chief Resilience Officer,
Monroe County, Florida

[JOHN HALL](#)

President and CEO,
HARC

[JENNIFER HUGHES](#)

Director, Design and Creative Placemaking
National Endowment for the Arts

[COMMISSIONER DENNIS KNOBLOCH](#)

Former Mayor,
Valmeyer, Illinois

[JAY KOH](#)

Co-Founder and Managing Director
The Lightsmith Group

[DR. ALAN KWOK](#)

Director, Climate and Disaster Resilience
Northern California Grantmakers
/Philanthropy California

MELLISA MAKTUAYAQ JOHNSON

Inupiaq, Nome Eskimo Community
Tribal Member

DR. PABLO MENDEZ LAZARO

Associate Professor at the
Department of Environmental Health
University of Puerto Rico

TINA POOLE JOHNSON

Senior Vice President,
Network Services
Opportunity Finance Network

MARISSA RAMIREZ

Director, Community Strategies Equity,
Environment, and Justice Center
Natural Resources Defense Council

MONICA SANDERS

Managing Director, Georgetown
Environmental Justice Program
Georgetown University

DR. GAVIN SCHMIDT

Director,
Goddard Institute for Space Studies
NASA

DR. AR SIDERS

Assistant Professor,
Disaster Research Center
University of Delaware

SARAH SLAUGHTER

CEO and President
Built Environment Coalition

THOMAS SMITH III, ENV SP, CAE, F.ASCE

Executive Director,
ASCE

FORBES TOMPKINS

Manager, Federal Policy
Flood-Prepared Communities
The Pew Charitable Trusts

ADDITIONAL COLLABORATORS

Charlie Baker, *Commonwealth of Massachusetts*

Ko Barrett, *NOAA; IPCC*

Kevin Bush, *HUD*

Sandra Cauffman, *NASA*

Deanne Criswell, *FEMA*

Jerome Foster II, *OneMillionOfUs*

Eric Letvin, *FEMA*

Elizabeth Lien, *Department of the Treasury*

David Maurstad, *FEMA*

Gina McCarthy, *The White House*

Samantha Medlock, *U.S. House of Representatives*

Bill Nelson, *NASA*

Colette Pichon Battle, *Gulf Coast Center for Law
and Policy*

James Rattling Leaf, *Cooperative Institute for
Research in Environmental Sciences*

Satya Rhodes-Conway, *Madison, Wisconsin*

Andrew Wishnia, *U.S. Department of Transportation*

CLOSING

The [Resilient Nation Partnership Network](#) is honored to champion this movement with our committed partners across resilience, mitigation, adaptation, climate, equity and more. This incredible partnership grows in number every day. We hope this resource is a valuable guide toward advancing climate action across the Whole Community.

If you want to learn more, reach out to us. We want to hear your thoughts, ideas and perspectives. Email us at FEMA-ResilientNation@fema.dhs.gov and start a conversation.

To continued partnership,

The Resilient Nation Partnership Network Team



“What you do makes a difference, and you have to
decide what kind of difference you want to make.”

– Jane Goodall, Scientist and Activist



Resilient Nation
Partnership Network



FEMA

