



HISTORICALLY BLACK COLLEGES AND UNIVERSITIES (HBCUs) HAVE LONG BEEN PILLARS OF THE BLACK COMMUNITY, SERVING AS ENGINES OF EMPOWERMENT AND CATALYSTS FOR CHANGE. DESPITE FACING SYSTEMIC MARGINALIZATION AND INADEQUATE INVESTMENT THROUGHOUT HISTORY, THESE REVERED INSTITUTIONS HAVE DRIVEN TRANSFORMATION IN SOCIETY FAR BEYOND EXPECTATIONS FOR THEIR SIZE.

HBCUs are home to storied legacies that highlight the sheer brilliance, innovation and determination to thrive, all characteristics prevalent within these communities.

As the climate crisis intensifies, it not only brings unprecedented global threats, but also provides openings for progress. There is no doubt HBCUs have a pivotal role to play in rising to meet this moment. With deep community ties and their fingers on the pulse of society's most vulnerable and excluded populations, HBCUs are uniquely positioned to lead the charge toward climate justice and environmental resilience. Equipped with interdisciplinary knowledge and influenced by diverse lived experiences, the students and faculty of HBCUs can pioneer solutions that overcome systemic inequities exacerbated by climate change.

The climate change, sustainability and environmental justice arenas present unparalleled opportunities for HBCUs on multiple fronts, enabling these institutions to leverage their strengths in driving academic excellence, expanding career pathways, spearheading technological

innovation, activating economic mobility, and uplifting marginalized voices. Despite historical marginalization, the climate space provides a chance for HBCUs to assert their rightful leadership on the issues that will impact the world's ability to build an equitable and sustainable future.

Backed by UNCF's enduring commitment to championing HBCUs, this report aims to illuminate the tremendous potential for these institutions to bridge climate action with social justice. It is time to empower HBCUs with the investment and platforms they deserve to develop climate leadership. With the proper fuel behind them, HBCUs will undoubtedly ignite a transformative movement toward climate sustainability and environmental justice for all.

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DR. MICHAEL L. LOMAX *UNCF President and CEO*



Decades of scientific research leave no room for doubt: <u>climate change is real</u>, and it is a pressing global issue (Rosen, 2021). The United States, like much of the world, is experiencing the far-reaching impacts of climate change. Rising temperatures, extreme weather events, rising sea levels, and disruptions to ecosystems are all signs of a changing climate that is already threatening the quality of human life on our planet:

- According to recent data from the National Oceanic and Atmospheric Administration (NOAA), the last few
 decades have witnessed more frequent and intense heat waves. Regions like the Southwest and the Great
 Plains have experienced record-high temperatures, affecting agriculture, water resources, and public health.
- The United States has seen a **rise in extreme weather events**, including hurricanes, wildfires, and flooding. In recent years, hurricanes like Harvey, Maria, and Irma have caused widespread devastation, with <u>billions of dollars</u> in damages (NOAA, 2023).
- Coastal regions are facing the threat of flooding and other disasters due to melting polar ice caps and the
 expansion of seawater as it warms. Cities like Miami, New York, and New Orleans are particularly vulnerable
 to inundation. <u>A 2020 article by Business Insider</u> suggests that these cities could disappear by 2100.
 This poses a significant economic and infrastructural challenge.
- The changing climate has also led to disruptions in a range of ecosystems, including altered migration patterns, habitat loss, and threats to biodiversity. For example, the Environmental Protection Agency (EPA) suggests that the warming of oceans has resulted in shifts in fish populations, which has negatively impacted the fishing industry.

These examples represent only a fraction of the challenges facing our world due to the climate threat. From rising temperatures and extreme weather events to disruptions in ecosystems and threats to biodiversity, the consequences of climate change are profound.

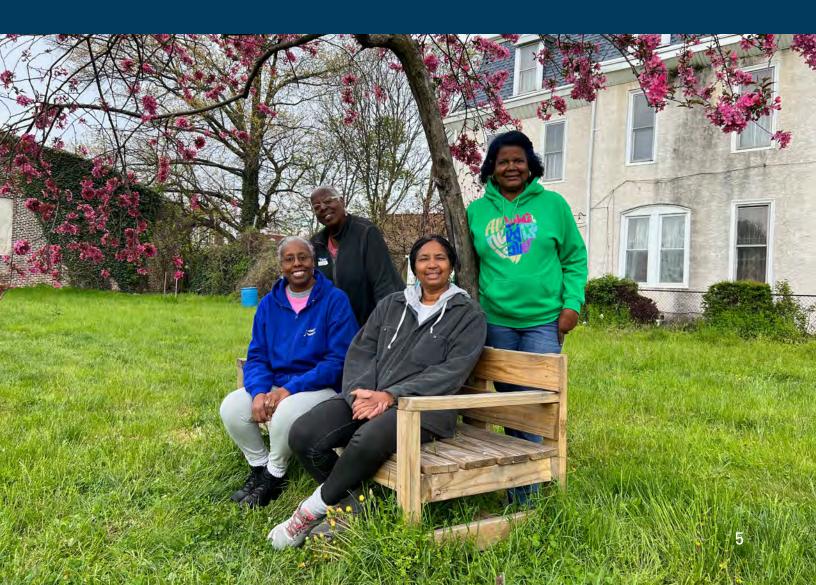
INTRODUCTION (continued)

While climate issues impact the world, it is essential to recognize that the impacts are not borne equally across all communities. Regrettably, research proves that communities of color most often bear the brunt of these environmental challenges.

A November 2023 report by McKinsey examines the climate risks that critically impact Black communities in the United States. Black communities are heavily concentrated in regions – primarily the southern United States– that overlap with severe climate risks. About 60% of Black Americans are concentrated in the southeast where exposure to heat, hurricanes, and flooding is high. As a result, Black populations are more likely than their counterparts to be exposed to flooding, hurricane risk, and extreme heat.

These risks are well known to the Black community. In 2005, the city of New Orleans was ravaged by Hurricane Katrina, which claimed more than 1,800 lives and left a trail of devastation costing, according to NOAA estimates, \$108 billion, making it the costliest tropical cyclone in history. According to Environment & Energy News, of the seven zip codes that incurred the most damage, four of them had populations that were at least 75 percent Black.

Furthermore, in the aftermath of natural disasters, wealth disparities widen: white communities <u>witness an increase in average wealth</u> while minority communities experience wealth decreases after these catastrophic events. (Howell & Elliott, 2018).





INTRODUCTION (continued)

The impact channels of climate risk, such as property damage, lowering property values, loss of labor productivity, inequitable energy costs and health-related outcomes, all adversely affect Black socio-economic mobility.

For example, according to a 2020 report produced by the American Council for an Energy-Efficient Economy, 36% of Black households in metro Atlanta experience a severe energy burden compared to other communities.

Climate risks also compound many of the socioeconomic challenges Black communities already face, including access to jobs; business, financial and consumer needs; and stable property ownership:

- One out of five Black Americans live in food deserts, with limited access to fresh, healthy food options.
- Black communities reside in "fence-line" communities with elevated pollution levels at a rate 75% higher than their White counterparts (White, 2018).
- The prevalence of <u>asthma among African American children is 13.4%</u>, <u>significantly surpassing</u> the 7.3% observed in White children.

From disproportionate exposure to pollution and extreme weather events to limited access to resources and opportunities for adaptation, these <u>communities face multi-faceted vulnerabilities</u> (Smith, 2021). Environmental injustices are <u>deeply rooted</u> and intertwined with historical discriminatory practices (Pecci, 2023).

Addressing these issues requires a comprehensive understanding of the interconnected factors contributing to environmental disparities and the implementation of equitable policies to ensure a sustainable and just future for all communities. Without an intentional and systemic response to the challenges of climate change, the racial gaps identified above could grow even wider.



Environmental justice is broadly defined as the fair distribution of environmental benefits and burdens that ensure all individuals, regardless of their race, socioeconomic status, or geographic location, have equal access to a healthy environment. Subject matter experts and advocates of environmental justice direct their focus on the impact of environmental decision making on underserved populations, including disproportionate exposure to pollution, inadequate access to clean air and water, and limited representation in decision-making processes related to environmental policies (Bullard & Wright, 2012).

Environmental injustices often result in adverse health outcomes, such as higher rates of respiratory diseases and cancers in affected communities, making the cause of environmental justice a global public health issue. (Cho, 2020). In response to the movement and organizing efforts, the United States government has enacted several laws and policies to address environmental justice, including the National Environmental Policy Act and executive orders promoting equity in federal actions.

The environmental justice movement has inspired community leaders, philanthropic organizations and advocacy groups to create the conditions for equitable

environments for all. More recently, these leaders have expanded the movement to consider the intersection between environmental justice and gender, LGBTQIA+ and immigration status.

The role of HBCUs and their affiliates in the environmental justice movement's development was significant and multifaceted. Dr. Robert D. Bullard, a graduate of Alabama A&M University and Clark Atlanta University, is widely regarded as the "father of environmental justice" and played a crucial role in planning the First National People of Color Environmental Leadership Summit in 1991 in which the 17 principles of environmental justice were first established.

The first environmental justice program in the United States was launched at the University of Michigan under the leadership of environmental justice pioneer Bunyan Bryant. That same year, Dr. Beverly Wright created the Deep South Center for Environmental Justice, partnering with HBCUs Dillard University and Xavier University. Since the formative years of the movement, dozens of HBCUs have taken on the cause of leadership in environmental justice.





Through HBCUs, a powerful legacy converges with a forward-looking vision. Our institutions, rooted in resilience and innovation, can lead the charge in environmental leadership.

DR. ROCHELLE FORDPresident, Dillard University

HBCUs have long been pivotal in advancing academic excellence and addressing significant societal issues, particularly as anchor institutions in the Black community. Their role extends beyond education, embodying empowerment, leadership, and positive community influence.

Despite facing systemic barriers, HBCUs have been instrumental in fostering economic mobility and building a resilient Black middle class, as evidenced by their enduring legacy and the strategic initiatives they continue to launch.

HBCUs are strategically positioned to lead in sustainability and climate action due to their influence in minority communities disproportionately affected by environmental injustices. Though they have often been forced to work from the margins, HBCUs have made considerable contributions to both amplify climate awareness and create the conditions for a just and sustainable future. These institutions' engagement in

the climate change arena is not only a testament to their foresight and dedication, but is also a reflection of a deep-seated commitment to advocating for and implementing practices that uplift communities traditionally excluded from positions of power, resource abundance and influence.

HBCU leadership in climate and sustainability will be critical to creating more equitable and resilient communities in the face of the climate threat. The need to support HBCUs in fully realizing their potential as pivotal community anchors is becoming clearer every day.

By bolstering their capacity to lead in the range of issues connected to environmental stewardship, HBCUs can maximize their potential as community anchors, shaping a sustainable future for the communities they serve.



HBCUs: ANCHORS OF BLACK PROGRESS (continued)

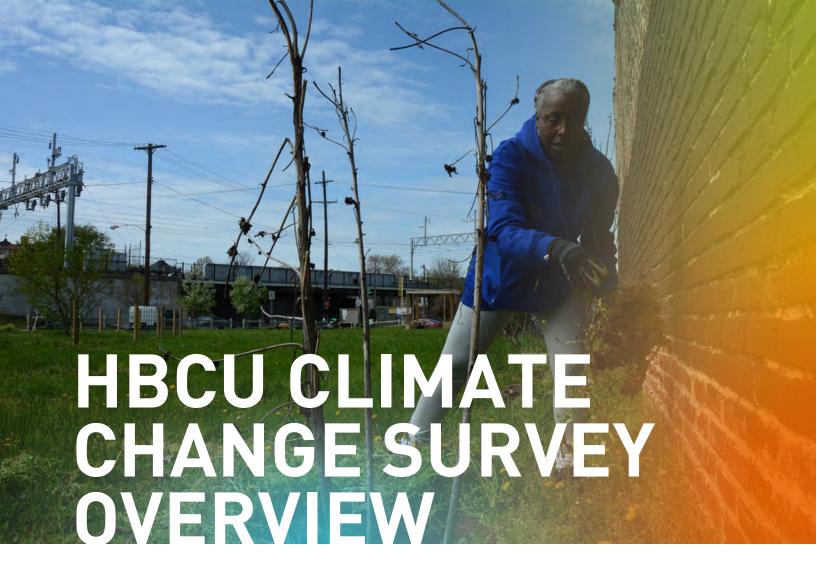
For 80 years, UNCF has played a crucial role in advocating for HBCUs, spearheading programs that enhance educational quality while addressing the myriad challenges faced by both the institutions and the students and communities they serve. Among these challenges, climate change, sustainability and environmental justice are areas in which UNCF has amplified the leadership of HBCUs. This commitment is rooted in an understanding of the essential role HBCUs serve within their communities and their place within the national fabric.

Climate change and environmental justice were among the first areas of focus for UNCF's Institute for Capacity Building (ICB). In 2010, the Institute released the Minority-Serving Institutions Green Report in collaboration with Second Nature, an organization committed to accelerating climate action in and through higher education. The report

included a historic landscape study elevating awareness of climate and environment-related activity within Black colleges and universities, Hispanic-Serving Institutions, and Tribal Colleges and Universities.

Over the course of the next decade, ICB built a change management model to support institutional adoption of key priorities within a growing network of Black colleges and universities committed to transformation and participation in a range of communities of practice.

With support from the Waverley Street Foundation,
UNCF committed to explore the role of Black college leadership in climate change, sustainability, and environmental justice.



As a core component of its exploration, UNCF launched an institutional survey to better understand opportunities to amplify HBCUs leadership in climate and sustainability. Administered during spring and summer 2023, the survey was distributed among a diverse group of HBCUs to capture their unique perspectives and practices related to environmental stewardship.

The survey investigated eight critical categories of climate and sustainability efforts within HBCUs:

- Administration: Examining leadership, policy, and management practices in sustainability.
- Community Engagement: Analyzing partnerships, outreach programs, and community-based sustainability projects.
- Curriculum + Research: Reviewing educational offerings and research capabilities.
- Energy and Decarbonization: Evaluating strategies for energy efficiency and reduction of carbon footprints.

- Food + Recycling and Agriculture: Investigating sustainable dining, waste management, and agricultural practices.
- Green Buildings: Assessing the adoption of sustainable construction and facility management.
- Green Investing + Grant Management: Probing financial strategies that support sustainability objectives.
- Student Involvement: Documenting student engagement and activism in sustainability efforts.



Twenty HBCUs participated in the study. These institutions represent a mix of urban (13), suburban (2), and rural (5) settings, across 10 states and one U.S. territory, highlighting the diverse contexts in which HBCUs operate. Furthermore, the survey encompassed both private (14) and public (6) institutions, including 13 universities and 7 colleges.

- BENNETT COLLEGE
 Greensboro, North Carolina (Private, Suburban)
- BOWIE STATE UNIVERSITY
 Bowie, Maryland (Public, Suburban)
- CLARK ATLANTA UNIVERSITY
 Atlanta, Georgia (Private, Urban)
- DILLARD UNIVERSITY
 New Orleans, Louisiana (Private, Urban)
- FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY
 Tallahassee, Florida (Public, Urban)
- HUSTON-TILLOTSON UNIVERSITY
 Austin, Texas (Private, Urban)
- JACKSON STATE UNIVERSITY
 Jackson, Mississippi (Public, Urban)
- JARVIS CHRISTIAN UNIVERSITY
 Hawkins, Texas (Private, Rural)
- LANE COLLEGE
 Jackson, Tennessee (Private, Urban)
- MOREHOUSE COLLEGE
 Atlanta, Georgia (Private, Urban)

- RUST COLLEGE
 Holly Springs, Mississippi (Private, Rural)
- SAVANNAH STATE UNIVERSITY
 Savannah, Georgia (Public, Urban)
- SHAW UNIVERSITY
 Raleigh, North Carolina (Private, Urban)
- SPELMAN COLLEGE
 Atlanta, Georgia (Private, Urban)
- STILLMAN COLLEGE
 Tuscaloosa, Alabama (Private, Urban)
- TALLADEGA COLLEGE
 Talladega, Alabama (Private, Rural)
- TENNESSEE STATE UNIVERSITY

 Nashville, Tennessee (Public, Urban)
- UNIVERSITY OF THE VIRGIN ISLANDS
 Charlotte Amalie, Virgin Islands (Public, Rural)
- VOORHEES UNIVERSITY
 Denmark, South Carolina (Private, Rural)
- XAVIER UNIVERSITY OF LOUISIANA
 New Orleans, Louisiana (Private, Urban)

The survey was designed to provide a foundational understanding of current climate and sustainability practices at HBCUs, pinpointing both the strengths of the network and the areas where more focused efforts are necessary. Using the results of the survey, we seek to develop strategies to build capacity to develop and implement tailored programs and interventions that align with HBCU-specific climate and sustainability aspirations.



In response to the study, several HBCUs shared milestones that underscore their innovative approaches to sustainability:

- BENNETT COLLEGE partnered with the
 Massachusetts Institute of Technology to implement
 a social impact program for data analysis on utility
 usage, with a goal of carbon neutrality by 2045.
- BOWIE STATE UNIVERSITY created a comprehensive climate action plan that led to development of a solar network to meet the campus energy needs.
- CLARK ATLANTA UNIVERSITY revitalized the Environmental Justice Resource Center to enhance environmental scholarship and community engagement - the Center hosted the HBCU Environmental Justice Summit in April 2023.
- FLORIDA AGRICULTURAL AND MECHANICAL
 UNIVERSITY hosted the Food Energy Water Nexus
 International Summit and initiated a Climate-Smart
 Agriculture Forestry Program.

- HUSTON-TILLOTSON UNIVERSITY installed rooftop solar panels that contribute 8-10% of campus energy usage.
- LANE COLLEGE launched an extensive energy efficiency project affecting lighting, water conservation, HVAC systems, infection control, and window replacements across campus facilities.
- SPELMAN COLLEGE successfully sold carbon credits, reinvesting the proceeds into a sustainability fund.
- XAVIER UNIVERSITY OF LOUISIANA celebrated several faculty for receiving awards related to their sustainability research.



The forthcoming section synthesizes key insights from both the survey and from UNCF's broader engagement with the HBCU climate and sustainability landscape.



HBCUs' FOUNDATIONAL SUSTAINABILITY AND CLIMATE ACTION ACTIVITIES REPRESENT UNTAPPED ASSETS, POISED TO REDEFINE LEADERSHIP IN ENVIRONMENTAL JUSTICE AND INNOVATION.

HBCUs have actively integrated sustainability and climate action into their core activities, demonstrating a commitment to environmental stewardship through a host of initiatives that enhance campus sustainability to promote practices that contribute to a greener environment.

Our findings reveal that HBCUs sustain multi-faceted engagement in foundational activities that pave the way for more advanced climate-related initiatives:

Green Initiatives: A substantial 85% of surveyed HBCUs have implemented green programs, highlighting their commitment to sustainability. These initiatives include enhancing curricula enhancements, installing solar panels, forming student-led environmental groups, establishing community gardens, and promoting biking and walking trails. Such efforts underscore institutional dedication to fostering a culture of sustainability and environmental awareness among students and faculty.

- Recycling Programs: An equivalent 85% of surveyed HBCUs actively recycle a range of materials, including plastics, cardboard, aluminum, electronics, and paper. This widespread adoption of recycling practices signifies a concerted effort to minimize waste and promote resource conservation on campuses.
- Sustainable Dining: Notably, all responding institutions (100%) have embraced sustainable dining practices by offering trayless dining, sourcing organic and locally grown produce, composting food waste, and donating excess food to local charities. These measures not only reduce the environmental footprint of campus dining services, but also contribute positively to the local community. The presence of campus gardens at half of the surveyed HBCUs further emphasizes their role in promoting local food production and biodiversity.

In many cases, the commitment to these foundational practices is incorporated into formal initiatives and strategic plans. At Xavier University of Louisiana, <u>XULA Green Initiative</u> has successfully integrated resource efficiency, sustainability, and resilience into campus life, encouraging a culture that not only supports but also champions environmental engagement among students, faculty, and the surrounding community.

Similarly, the <u>Sustainability Institute</u> at Florida Agricultural & Mechanical University serves as a beacon of innovation and collaboration, offering educational programs and community partnerships that address critical sustainability challenges such as energy, water, and food security.

These specific cases highlight the broader capacity of HBCUs to serve as leaders and innovators in the global sustainability movement. By harnessing their foundational activities and strengths, HBCUs can redefine the narrative around climate action and sustainability in higher education.



INSIGHT 2

LEADERSHIP OPPORTUNITY: CATALYST FOR SUSTAINABILITY

LEVERAGING THEIR LEGACY OF COMMUNITY EMPOWERMENT, HBCU LEADERS ARE UNIQUELY EQUIPPED TO PIONEER SUSTAINABILITY EFFORTS, TRANSFORMING CLIMATE ACTION AND SUSTAINABILITY EFFORTS IN THE COMMUNITIES THEIR INSTITUTIONS SERVE.

Despite barriers and resource constraints, some institutional leaders are striving to create the conditions for broader impact on climate action and sustainability, through alignment of their missions, strategic plans and partnerships:

- Prioritizing Climate Action and Sustainability: 40% of responding HBCUs rate climate and sustainability initiatives as extremely or very important when compared to other institutional priorities, indicating a strong commitment across institutions in elevating climate and sustainability.
- Commitment to Green Initiatives: An identical 40% of HBCU respondents have embraced national green initiatives, including the American College and University Presidents' Climate Commitment.
- **Development of Sustainability Plans:** A quarter of the institutions surveyed **have a formalized sustainability plan in place.** An additional 35% discussing or in the process of formulating a plan.
- Board Engagement and Sustainable Investing: 50% of responding institutions reported consideration of sustainable investing strategies by their boards of trustees, further emphasizing their role in promoting local food production and biodiversity.





A standout example of leadership commitment is Clark Atlanta University, which hosted the 2023 HBCU Environmental Justice Summit. This event underscored the university's active role in addressing environmental injustices, particularly in minority communities. Through engaging discussions and the involvement of a broad spectrum of stakeholders, Clark Atlanta has illuminated the path forward for HBCUs in climate research, policy, and action.



Leveraging our strong connections to many of the most marginalized communities in the country positions HBCUs to blaze a path forward on climate research, policy, and action.

DR. GEORGE T. FRENCH, JR.

President, Clark Atlanta University

In 2023, the Intentional Endowments Network (IEN) – an organization committed to amplifying sustainable investment strategies – announced the expansion of its membership to include UNCF and several HBCUs, including Dillard University, Florida Memorial University, Howard University, Johnson C. Smith University, Lincoln University, Talladega College, and the Atlanta University Center Consortium (composed of Clark Atlanta University, Morehouse College, Morehouse School of Medicine, and Spelman College). IEN, Second Nature and UNCF have committed to a strategic partnership to engage HBCU leaders and champions at the 2024 Higher Education Climate Leadership Summit.

Leadership commitment serves as a powerful catalyst for institutional sustainability initiatives, through fostering a conducive environment to conceptualize, plan for and implement sustainability endeavors. Empowering HBCU leadership in climate change and sustainability networks with connections, support and resources can unlock a future in which HBCUs are not only participants but also leaders in this movement.



Spelman College has had a climate action plan with Second Nature since 2010, a progressive time to be planning and implementing this work. It shows that HBCUs have been committed to climate activism, even before it was a more mainstream discussion.

BLYTHE COLEMAN-MUMFORD

Climate Programs Regional Manager, Second Nature



ADDRESSING THE STARK FUNDING GAP IS CRITICAL TO UNLEASHING HBCUs' FULL POTENTIAL AS INNOVATORS AND LEADERS IN THE GLOBAL SUSTAINABILITY AND ENVIRONMENTAL JUSTICE MOVEMENT.

The critical need for increased funding in climate and sustainability initiatives within HBCUs emerges as a paramount concern, according to our survey. The findings highlight a prevalent challenge: despite HBCUs' active engagement in and commitment to sustainability and climate action, financial constraints significantly limit their ability to advance.

- Limited Dedicated Budgets: A mere 15% of HBCUs surveyed have a specific budget allocated for climate and sustainability projects, highlighting the scarcity of financial resources available for these critical areas.
- Uncertainty in Grant Funding: While there is a notable ambiguity regarding the amount of grant funding received for sustainability initiatives, a small fraction of responding institutions report investments above \$250,000, underscoring the limited external support HBCUs receive for their environmental efforts.
- Stagnant Funding Levels: Alarmingly, 40% of surveyed HBCUs report no increases in funding for climate and sustainability initiatives in recent years, making it more challenging to scale up essential programs at these institutions.

Hampton University's School of Science, bolstered by a \$1.76 million grant from the Simons Foundation, exemplifies the transformative impact of substantial investment on HBCUs' sustainability and renewable energy endeavors. This funding supports Elevating Hampton Excellence, the university's 10-year strategic plan, and drives the development of the Stellarator for Training and Research Program. In collaboration with the Princeton Plasma Physics Laboratory, the program aims to pioneer advances in fusion plasma science, highlighting the stellarator's role in achieving practical fusion power.

Hampton's success showcases how targeted financial support can unlock innovative, sustainable solutions for the future. With dedicated funding for infrastructure improvements, research development, and responsive educational programs, HBCUs can deepen their contribution to the broader goal of creating a resilient and sustainable future for all.



HBCUs' EMBRACE OF RENEWABLE ENERGY NOT ONLY REDUCES THEIR CARBON FOOTPRINT BUT ALSO POSITIONS THEM AS TRAILBLAZERS IN COMMUNITY-FOCUSED CLEAN ENERGY SOLUTIONS.

The shift towards renewable energy sources marks a significant trend among HBCUs, positioning these institutions as leaders in sustainable energy solutions within their communities. Our survey suggests an increase in the commitment of HBCUs to solar, wind and other renewable energy projects, reflecting a concerted effort to diminish carbon footprints and champion innovative practices.

- Energy Efficiency and Certification: A significant portion of surveyed HBCUs report obtaining energy efficient
 certifications for buildings on their campuses. Additionally, 65% have installed technologies aimed at improving
 energy efficiency, such as LED lighting and energy-efficient HVAC systems.
- Renewable Energy Generation and Greenhouse Gas Reduction: While few responding institutions currently
 generate renewable energy on campus, a larger segment of those surveyed are exploring renewable options.
 Half of the institutions surveyed are actively pursuing initiatives to reduce greenhouse gas emissions and
 lessen fossil fuel dependency.
- Campus-wide Energy Conservation: All responding institutions promote energy conservation through
 programs, initiatives and campaigns on their campuses, indicating a universal commitment to reducing
 energy use.

North Carolina Agricultural & Technical State University's commitment to sustainability is reflected in their <u>Center for Energy Research and Technology</u> (CERT), an interdisciplinary nexus for energy research and the development of new, clean energy technologies. With a broad focus that encompasses renewable energy, energy efficiency, and sustainable green buildings, CERT implements the State Tool for Electricity Emissions Reduction to further carbon emission reduction and sustainable energy solutions.



HBCUs serve as a powerful beacon, illuminating the path towards a more equitable and sustainable world for generations to come.

PARIS PRINCE

Director of Justice, Equity, Diversity & Inclusion, The Intentional Endowments Network

In South Carolina, <u>Claffin University</u>, <u>Denmark Technical College</u>, and <u>South Carolina State University</u> received \$10 million from the Department of Energy to repurpose electric vehicle lithium-ion batteries, offering a sustainable solution to the growing stockpile of used batteries, enhancing grid resiliency and lowering energy costs. The project also launched a joint initiative between the institutions to support high-tech career training opportunities.

Replicating this regional innovation and workforce model holds tremendous promise for HBCU cultivation of career pathways initiatives in the green technology sector.



At Gemini Energy Solutions, HBCU Green Fund Climate Fellows are leveraging our data capture specialist training and applying it in their communities to identify energy efficiency solutions for local businesses and residents.

DR. ANTHONY KINSLOW IIFounder and CEO, Gemini Energy Solutions



INSIGHT 5

CURRICULUM ENHANCEMENT FOR GREEN FUTURES

HBCUs ARE MOLDING THE NEXT GENERATION OF ENVIRONMENTAL LEADERS THROUGH INNOVATIVE SUSTAINABILITY EDUCATION.

HBCUs are proactively embedding sustainability and environmental awareness into their academic programs, preparing students to tackle global environmental challenges and excel in the green economy. This curriculum enhancement goes beyond introducing environmentally focused courses; HBCUs are shaping a generation that will lead sustainability movements for their communities.

- Degree Programs in Sustainability: Half of the surveyed HBCUs offer degree programs or certifications in fields critical to sustainability. Respondents highlighted an array of degree programs, certifications and concentrations in fields related to climate change and sustainability, including community resilience, coastal communities' risks and management, earth science, environmental justice, environmental studies, marine sciences and wildlife biology.
- Faculty Engagement and Research: The commitment to sustainability is further evidenced by the dedication of faculty to active sustainability research. All institutions with sustainability-focused programs also participate in research, highlighting HBCUs' role in advancing knowledge of renewable energy, climate change, and environmental protection.



The <u>Barbara Jordan – Mickey Leland School of Public Affairs</u> at Texas Southern University illustrates the strategic integration of sustainability into academic offerings. With a vision to be recognized for global and urban affairs and a mission focused on preparing professionals to administer sustainable communities, the school sets a benchmark for environmental policy and sustainability education, encouraging inquiry, ethical behavior, and social discipline aligned with global sustainability goals.

Hampton University is also a prime example of the merger of sustainability with academic offerings, leveraging a \$4.9 million U.S. Department of Education grant to establish an interdisciplinary climate science degree program.



Every student should graduate understanding principles of sustainability, why climate change is an existential threat, and implications for their personal lifestyle and career choices.

FELICIA DAVISCEO and Founder, HBCU Green Fund

According to UNCF's Frederick D. Patterson Research Institute, nearly 20 percent of all Black recipients of undergraduate degrees in science, technology, engineering and mathematics received their degrees from HBCUs. Using this strong foundation and recent efforts to adopt sustainability programs, HBCUs and their graduates are poised to make significant contributions to addressing pressing environmental challenges.





HBCUs' COMMUNAL ETHOS UNIQUELY POSITIONS THEM AS NATURAL LEADERS IN SUSTAINABILITY, PREPARED TO DRIVE TRANSFORMATIVE ENVIRONMENTAL JUSTICE AND CLIMATE ACTION PRIORITIES FOR MARGINALIZED COMMUNITIES.

HBCUs are extending their sustainability efforts beyond campus borders, serving as key community anchors for environmental advocacy and action. Through dynamic partnerships, outreach, and community projects, HBCUs are engaging local stakeholders to enable broader environmental awareness and implementation of sustainability practices.

- Wide-Ranging Sustainability Initiatives: The majority of surveyed HBCUs (85%) have integrated sustainability into campus life through green programs, including the development of eco-friendly campus structures and the promotion of community gardens.
- Public Engagement and Education: A significant number of responding HBCUs are engaging with external organizations and the public through sustainability initiatives and educational sessions. 80% of surveyed institutions participate in continuing education on climate and sustainability, including student-led projects, festivals, conferences, and engagement campaigns that are open to the public.
- Collaboration with Agricultural Communities: More than half of the responding institutions (55%) collaborate with local farmers to promote climate-resilient agricultural practices, demonstrating the practical application of sustainability in the local economy and food systems.



Food sovereignty is a critical aspect of environmental justice, and HBCU contributions help build community resilience, reduce food apartheid, and ensure that communities have greater control over their food sources.

ALEXA WHITEClimate Fellow, University of Michigan

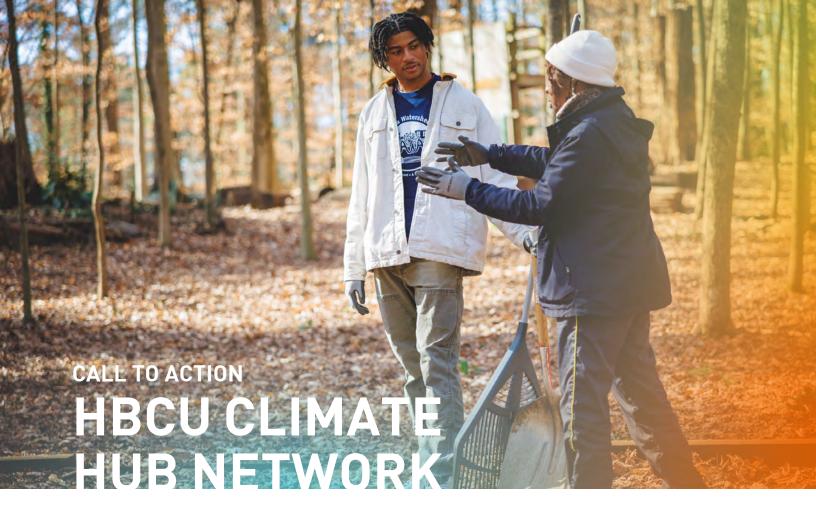
Tennessee State University's Otis L. Floyd Nursery
Research Center underscores HBCUs' contribution
to sustainable land management and agroforestry,
reflecting the broader mission of HBCUs to support
industry and environmental health through innovative
research and extension programs. The center's mission
is to provide leadership in strengthening and expanding
nursery crop production in Tennessee through
development of programs in entomology, genetics,
horticulture, pathology, chemical ecology
and sustainability.

HBCUs can also help activate global engagement in climate change and sustainability efforts. In this endeavor, HBCUs gain valuable insight and guidance from one of their own, the only HBCU outside of the continental United States, the University of the Virgin Islands (UVI).

UVI, located in the Caribbean, is at the forefront of climate research and adaptation strategies due to the region's vulnerability to devastating environmental shifts such as rising sea levels and extreme weather events. The Caribbean Green Technology Center at the University of the Virgin Islands secured two \$250,000 grants from the <u>U.S. Department of the Interior</u> through the competitive Energizing Insular Communities program in 2020 and 2022. This <u>financial support</u> aims to assist UVI in lowering energy costs, enhancing energy independence and resilience, setting an example by promoting awareness of renewable energy and e-mobility across the United States Virgin Islands community.

HBCUs' positioning as community centers for sustainability and environmental justice enables cultivation of meaningful dialogues and actions that extend far beyond their campuses. By reinforcing collaborations that bridge academic knowledge with community needs and advocacy, HBCUs are playing a crucial role in promoting sustainable practices and environmental awareness in their surrounding communities.





HBCUs, BY DESIGN AND TRADITION, HAVE ALWAYS BEEN MORE THAN JUST PLACES OF LEARNING; THEY ARE CENTERS OF EMPOWERMENT, CULTURAL AFFIRMATION, AND SOCIAL CHANGE.

THEIR ACTIVE INVOLVEMENT IN ENVIRONMENTAL SUSTAINABILITY AND CLIMATE CHANGE INITIATIVES IS A TESTAMENT TO THEIR HOLISTIC APPROACH TO EDUCATION – ONE THAT RECOGNIZES THE INTERCONNECTEDNESS OF ENVIRONMENTAL HEALTH, SOCIAL EQUITY, AND ECONOMIC PROSPERITY.

HBCUs' natural inclination towards community uplift positions them to lead environmental justice and sustainability in their regions and beyond. Looking ahead, the aspirational role of HBCUs in the climate discourse is not just optimistic. HBCUs are seeking to play a more central role in the decision making that adversely affects their climate realities.

The development of a network of HBCU climate hubs offers an innovative architecture to scale climate progress throughout the Black community. Climate hubs provide an opportunity for excluded communities to align with other vulnerable communities to activate a range of activities designed to empower their voices, perspectives, and authority.

These hubs can serve as a catalyst for asset building, academic advancement, research innovation, entrepreneurial experimentation, and economic development. Their design can incorporate the existing network and ecosystem of benefits within the HBCU community, optimizing available land for renewable energy ventures.

To accommodate the scope of possibilities within the HBCU network, we recommend engaging HBCUs in a discovery process to determine their capability to activate five strategies that could lead to the creation of HBCU climate hubs:

- Climate Leadership Development Hub: Establish local networks and leadership spaces through professional development, fellowships and mentorship programs to galvanize action between HBCU students, faculty, administrators and community members on climate priorities in local communities,
- 2. Climate Innovation Incubation Hub: Launch campus-based research and development labs, makerspaces and public-private partnerships that transform HBCUs into engines of climate-focused innovation and entrepreneurship.
- Climate Education and Training Hub: Drive academic program development across degree programs and curricula to incorporate skills and capabilities that will drive the next generation of climate solutions.
- 4. **Community Climate Activation Hub:** Spearhead hyperlocal and regional climate awareness and engagement campaigns, empowering grassroots activities that lead to behavior shifts on climate and sustainability priorities.
- 5. **Climate Economic Value Creation Hub;** Seed entrepreneurship and development of clean energy assets on campuses, generating eco-conscious revenue, job growth, and community wealth.

The development of HBCU climate hubs promotes community agency and autonomy, and also ensures that the benefits of resilience movements and the broader green transition increase individual and communal wealth.

Climate hubs can also respond to the growing demand for credential and certification programs that upskill learners for high-demand green economy careers. According to the 2023 U.S. Energy and Employment Report, America's energy workforce added almost 300,000 jobs in 2022. A significant percentage of those jobs were in the clean energy field. The economic impact of the clean energy economy is projected to produce more than 403,000 new jobs nationally, adding \$156 billion to the U.S. GDP (Clean Energy Report, 2023).

This economic landscape can generate sustainable employment opportunities for minority communities situated at the forefront of societal challenges. Intentional effort must be exerted to ensure that the emerging benefits of the green economy reach the Black community. Black workers are underrepresented in nearly every part of the clean energy sector, representing only 8 percent of the clean energy workforce. (E2, 2023). HBCU climate hubs could be instrumental in closing this gap, facilitating a just transition to a greener future.





Communities of practice will be a key strategy for HBCUs to harness their potential. Through networks such as the Deep South Center for Environmental Justice and the HBCU Climate Change Consortium, HBCUs have already reinforced a joint commitment to shared learning, professional development and innovation.



Broadening participation in STEM is a hallmark of the HBCU community of practice. Collaborative partnerships between nonprofits and corporate entities provide opportunities for students, faculty and communities to learn and grow.

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For each HBCU climate hub identified above, we recommend the development of a blueprint to support a networked approach to discovery, planning, implementation, and sustainability. An HBCU climate hub network can fuel an unparalleled acceleration of equitable climate progress at scale by reinforcing strengths across the HBCU network - from faculty expertise to community ties and facilities infrastructure.

This networked approach empowers each HBCU climate hub to move farther together than any one institution could move alone. An HBCU climate hub network would serve as a formidable powerhouse, seeding climate action and innovation throughout vulnerable communities.



HBCUs possess a unique opportunity to serve as resilience hubs for their local communities. Resilience hubs are trusted, community-centered places that are established to address daily community needs and are also equipped to provide support in the face of disasters such as wildfires, earthquakes, and extreme weather events.

Breaking Barriers to Resilience in the Atlanta University Center Consortium: Groundswell, in collaboration with the Partnership for Southern Equity, Spelman College, Morehouse College, Morehouse College of Medicine, and Clark-Atlanta University, is developing two resilience centers in West Atlanta. The larger center will serve the Atlanta University Center (AUC) community, while the second will be positioned in an energy-burdened, low-income residential neighborhood west of the AUC campus.

The Breaking Barriers project, supported by the National Renewable Energy Laboratory, focuses on energy innovation and improving electricity resilience at four HBCUs in West Atlanta. The project integrates microgrid technology, solar generation, and energy storage, aiming to provide critical services during outages.

THE TIME IS NOW

Realizing the full potential of HBCUs as pioneers in climate leadership will require a concerted and holistic effort across several fronts.

First and foremost, it will take **dedicated people and talent.** HBCUs need support to attract and retain top experts across climate disciplines, from environmental science faculty to sustainability leadership and operations staff. These personnel provide the intellectual capital and skills to advance climate agendas.

Additionally, activation of climate research will require **favorable policies** and removal of bureaucratic barriers. Streamlining institutional policies around procurement, infrastructure upgrades, and public-private partnerships can accelerate sustainability projects. Targeted legislation and programs that channel funding to Minority-Serving Institutions also bolster capabilities.

Improvements in processes and technologies will further empower HBCUs. By adopting sophisticated data analytics, technologies that advance climate innovations, and automated sustainability reporting, HBCUs can contribute to the development of climate infrastructure.

Visionary leadership is indispensable to drive strategic alignment, innovation, and growth in climate programs. Presidents, trustees, and administrators must actively prioritize and integrate sustainability into their institutions' identity. These leaders shape an eco-conscious culture that permeates all realms.

Abundant financial investment provides the fuel for HBCUs to actualize their climate goals. Federal and philanthropic grants allow institutions to invest boldly in infrastructure upgrades, cutting-edge research and development, and transdisciplinary academic offerings.

Beyond resources, achieving progress requires a staunch **belief in HBCUs** and their potential for climate contribution. Their resilience, community bonds, and trailblazing spirit uniquely equip them as changemakers.

Finally, HBCUs should be **empowered to take calculated risks** in new technologies, projects, and partnerships that drive breakthrough results.

With concerted support across the dimensions listed above, HBCUs will be able to flourish as participants and leaders across the climate change and sustainability landscape.



INVESTING IN CLIMATE CHANGE IN EXCLUDED COMMUNITIES

From both public and private sources, recent years have seen a surge of funding to address the challenge of climate change and sustainability. From the federal government, the American Jobs Plan outlines significant investments in infrastructure, including measures to improve resilience against climate impacts. Additionally, the Biden-Harris Administration announced an investment of more than \$2 billion to pave the way for a more sustainable and resilient future. Philanthropic investments towards climate action in Black and Brown communities have also increased.

- The BEZOS EARTH FUND made in 2023 a monumental commitment of \$400 million towards the Greening America's Cities initiative, with a focus on enhancing green spaces in underserved urban communities throughout the United States. The initiative commenced with an initial investment of \$50 million in five cities—Albuquerque, Atlanta, Chicago, Los Angeles, and Wilmington (DE)—and had plans to expand to additional U.S. cities by 2030. The funding aimed to improve the aesthetic appeal of cities and enhance livability, health, and well-being.
- The KRESGE FOUNDATION has demonstrated its commitment to addressing the pressing issues of climate resilience and health equity in low-income communities by awarding \$1.5 million in grants to 15 community-based nonprofit organizations across American cities. This substantial investment aligns with Kresge's Climate Change, Health & Equity (CCHE) initiative, focusing on strengthening community-based leadership as a key strategy.
- The MACQUARIE RACIAL EQUITY FUND (REF), launched in July 2020, is playing a crucial role in supporting non-profit organizations that strive to advance solutions for a more equitable and just society, with a particular emphasis on Black communities in the Americas. Committed to promoting racial equity through direct relief programs, research, policy, education, and economic equity initiatives, the REF has already awarded eight grants to nonprofits across the country, spanning areas such as Houston, Jacksonville, New York City and Philadelphia.

- The **SOUTHERN COMPANY FOUNDATION** recently unveiled a groundbreaking \$10 million investment in the HBCU Sustainable Communities Initiatives, facilitating a novel collaboration between INROADS and two prominent advocates for HBCUs UNCF and the Thurgood Marshall College Fund. This substantial investment is part of Southern Company's larger \$50 million multi-year initiative, announced in 2020, aiming to provide scholarships, internships, leadership development, and technology access for students in select HBCUs within the Southern Company systems' service footprint.
- The WAVERLY STREET FOUNDATION has committed to invest by 2035 the entirety of its endowment more than \$3 billion as of 2022 to support organizations working on solutions at the intersection of climate change and community priorities. UNCF has joined forces with the Waverly Street Foundation to explore the role HBCUs can play in addressing the challenges of climate change. Thanks to the generous investment, UNCF was empowered to conduct the landscape study contained in this report on the current activities and future aspirations of HBCUs to serve as climate hubs within their communities.



Without intentional, systematized and resourced plans of action, we run the risk of reinforcing the status quo, failing to empower the communities most impacted by climate change to become leaders of the environmental activism movement.

We are optimistic about the potential for a different future, one in which HBCUs lead a new vision for their communities within a climate landscape that is brimming with possibility.

IMAGINE:

- Campuses reinvigorated by investments in technologies and infrastructure, fostering renewable energy generation and resilient systems that provide sanctuaries during climate-based disasters.
- Carbon-neutral facilities showcasing **green building capabilities** and state-of-the-art makerspaces that spur next-generation sustainable technologies.
- Thriving **innovation ecosystems** anchored by HBCUs, developing climate research and entrepreneurship that flourishes through collaborations with national labs and industry partners.
- Highly skilled talent from HBCUs driving leadership in the climate workforce including startups emerging from business incubator programs.
- Transformational local and regional resilience networks fueled by HBCU programs and climate action projects, deploying innovative solutions in marginalized neighborhoods.
- A national climate agenda shaped by HBCU leaders and stakeholders, driving equity considerations and evidence-based plans for a decarbonized economy.

As we reflect on the landscape of climate engagement within HBCUs, one resounding truth emerges — the time for decisive action is now to center the role of HBCUs in the climate change and sustainability agenda. Despite facing systemic marginalization, these revered institutions have long been committed to environmental stewardship, serving as anchors and uplifting society far beyond expectations.

The climate crisis not only brings unprecedented challenges. but also provides openings to remedy injustice. HBCUs are strategically positioned to blaze trails towards climate equity and resilience, equipped with interdisciplinary knowledge and influence in vulnerable communities. Their academic prowess and communal ethos make HBCUs natural leaders in sustainability.

Through this report, we amplified HBCUs' impressive foundations — from curriculum innovation to renewable energy projects; however, stark funding and capacity gaps restrict their climate impact, demanding urgent investment to match ambitions. When adequately fueled, HBCUs can redefine higher education's consciousness on this critical issue.

With the right approach, HBCUs can spearhead a sustainability revolution, powered by intellect, equity and a dedication to social uplift. The time for climate action is immediate, and HBCUs are the changemakers this moment beckons. Together, we can champion their leadership, their voices and their brilliance — all to create the building blocks for a just and sustainable future.



THANK YOU, UNCF CLIMATE ADVISORY BOARD

We express our deepest appreciation to the esteemed members of the UNCF Climate Advisory Board for their visionary leadership, guidance and commitment to elevating HBCUs as climate powerhouses, leading the way to an equitable future. The board members' diversity of perspectives and breadth of expertise has been instrumental in shaping the strategies for HBCU climate engagement outlined in this report. Our progress would not have been possible without these dedicated changemakers.



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