NATIONAL Sciences
Engineering
ACADEMIES Medicine

Building Health and Climate Research Capacity in the U.S. Gulf Coast

Elevating Minority-Serving Institutions as Key Partners

Tuesday, October 29, 2024

University of Houston Downtown, Houston, TX





Welcoming Remarks



Daniel Burger
Program Director

Gulf Research Program, Health
and Resilience Board

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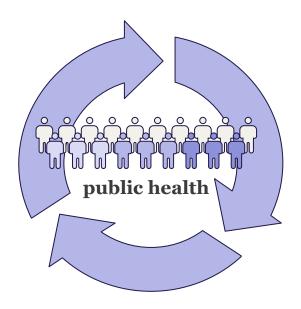
Workshop Purpose and Context

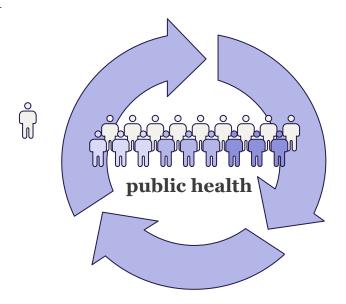


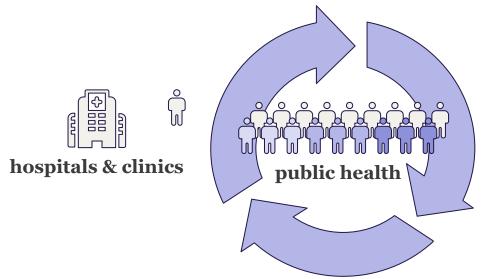
Francisca Flores
Program Officer

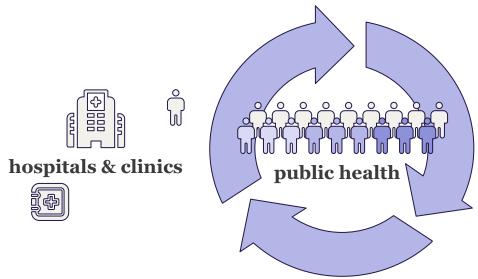
Gulf Research Program, Health
and Resilience Board

CONTEXT Challenge #1

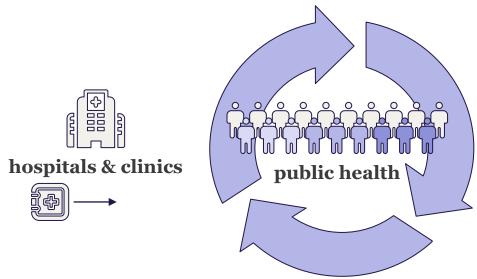


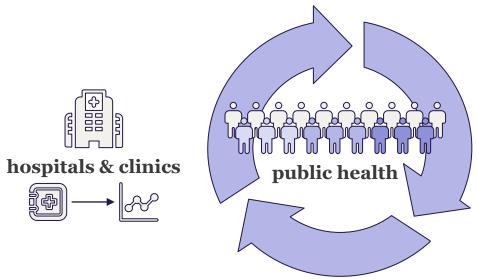


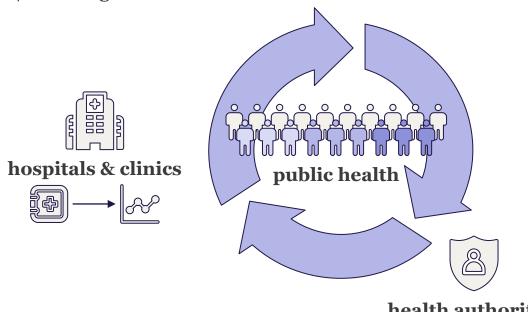




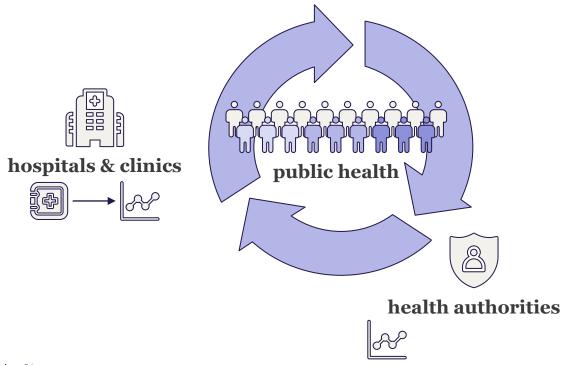


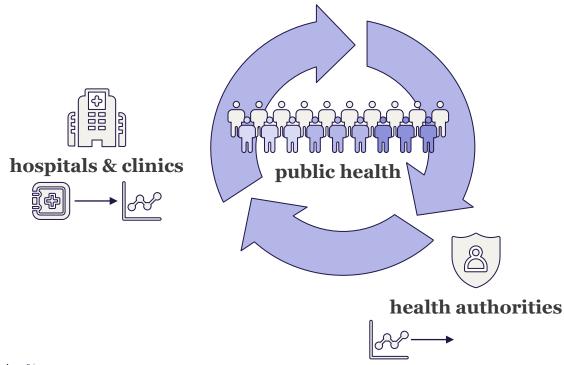


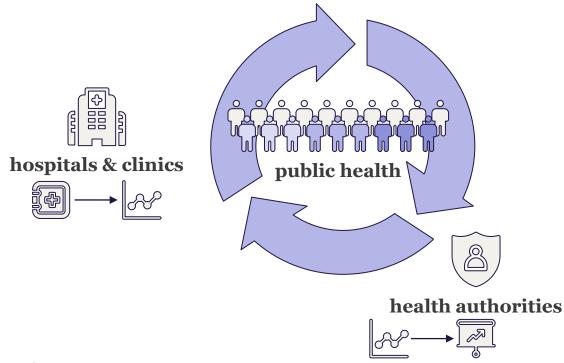


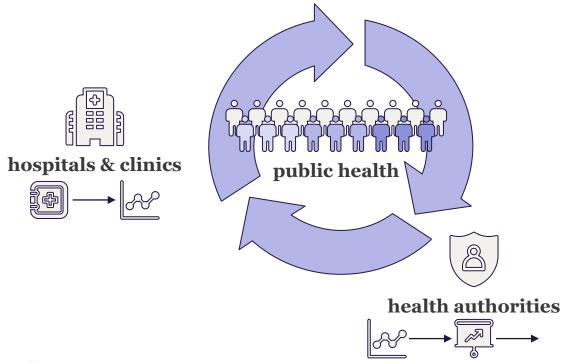


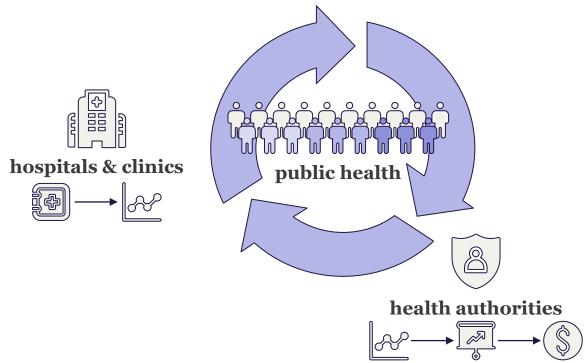
health authorities

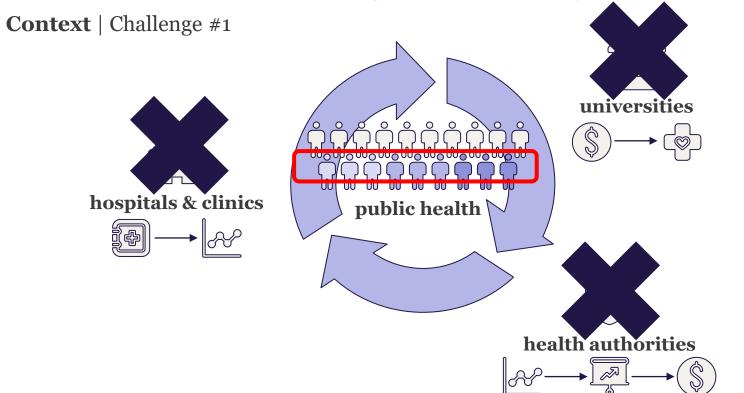


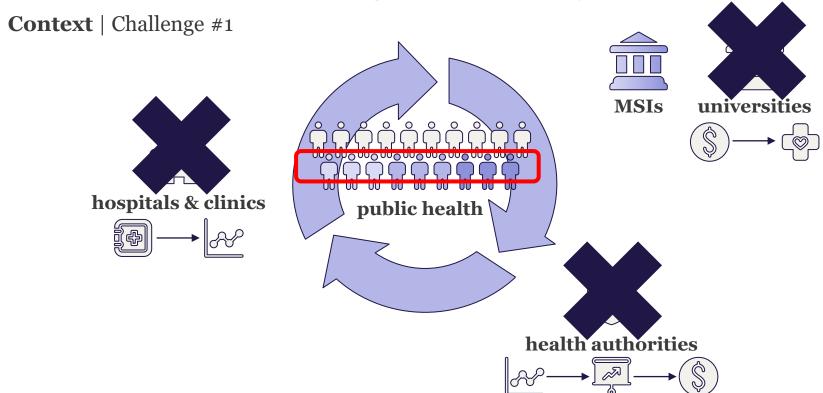


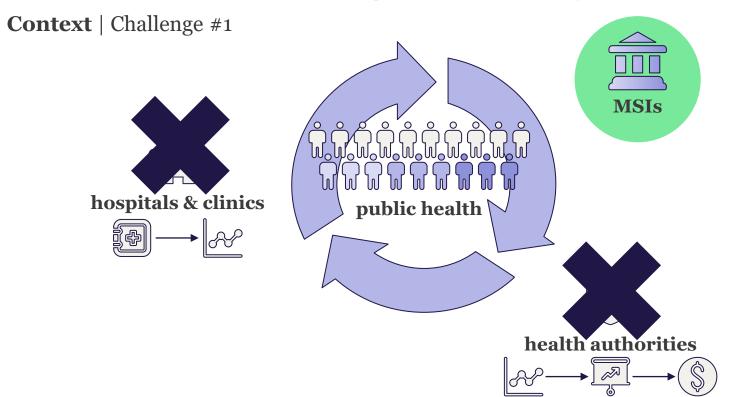


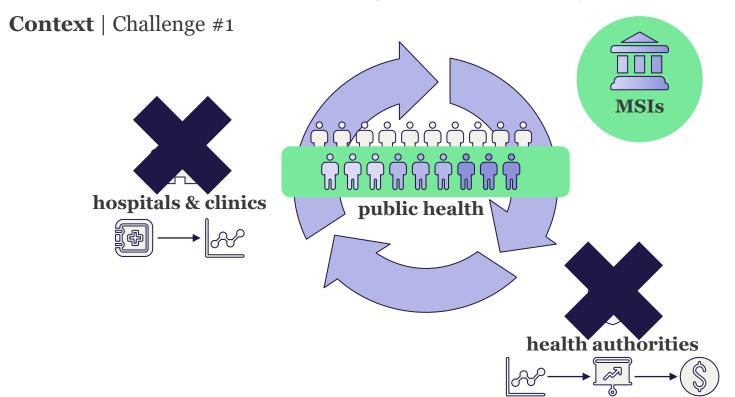


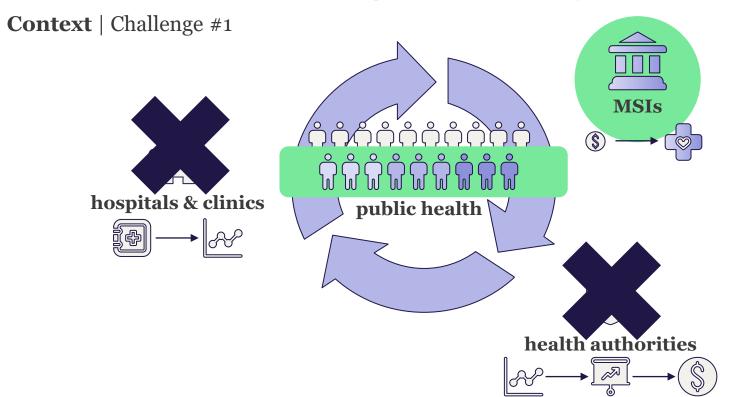




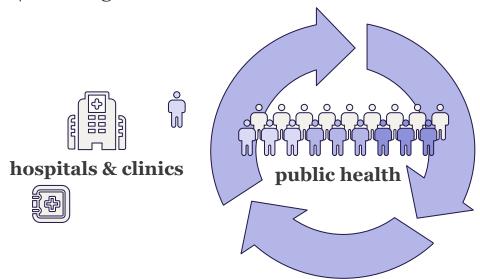


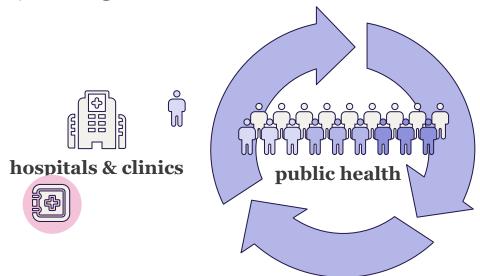


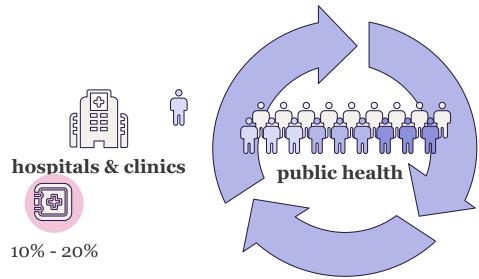


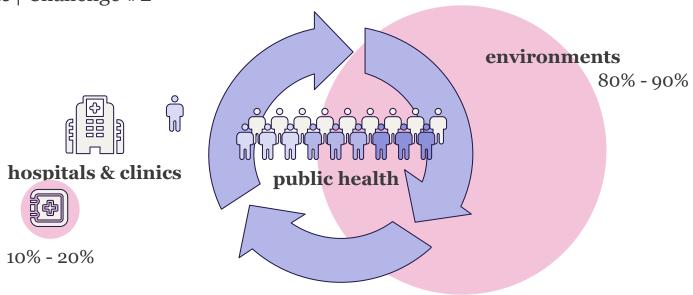


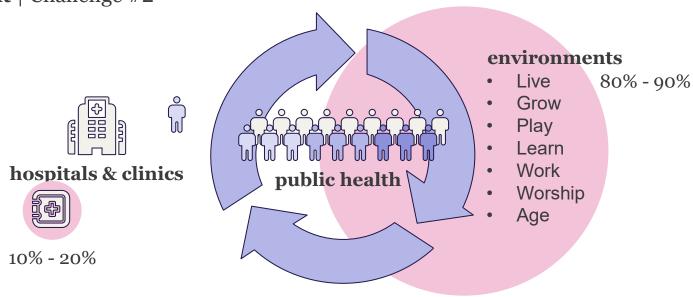
CONTEXT Challenge #2











Context | Challenge #2 climate environments 80% - 90% Live Grow Play Learn Work hospitals & clinics public health Worship Age 10% - 20%

Context | Challenge #2 climate environments 80% - 90% Live Grow Play Learn Work clinical lic health Worship determinants of health Age

Context | Challenge #2 social determinants of health clinical lic health determinants of health



PURPOSE

Purpose | Workshop #1

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 To better understand the expertise, capacities, and infrastructure at MSIs to support community-engaged research

Purpose | Workshop #1

- To better understand the expertise, capacities, and infrastructure at MSIs to support community-engaged research
- Explore opportunities for MSIs to participate in and lead community-engaged research in...
 - addressing climate change effects on human health,
 - inform and improve public health data systems, and
 - enhance community resilience to climate and environmental stressors





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What is your favorite food?

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To what extent do you believe HBCUs, HSIs, and MSIs in the Gulf region have the resources and capacity to address the climate and health challenges their communities face?

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03

Keynote Address

MSI/HBCU Community-Engaged Climate and Health Research in U.S Gulf Coast: What's the current status?



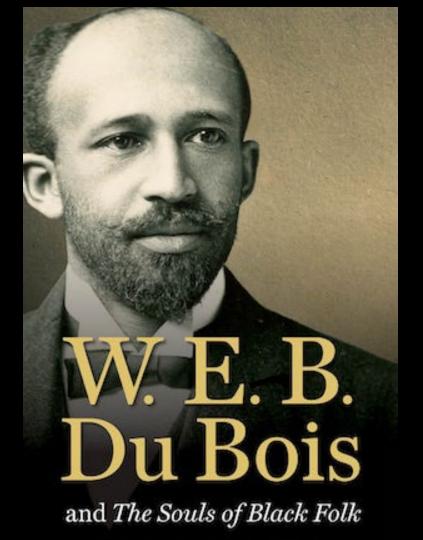
Robert BullardDistinguished Professor

Texas Southern University

LOOKING BACK TO MOVE FORWARD: LESSONS FROM HBCU ENVIRONMENTAL JUSTICE CENTERS AND HBCU CONSORTIA

Robert D. Bullard, Ph.D.

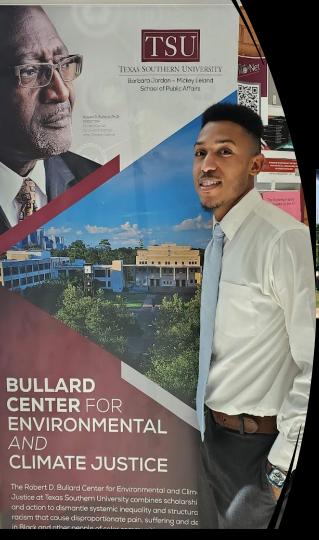
Department of Urban Planning & Environmental Policy
Bullard Center for Environmental & Climate Justice
Texas Southern University



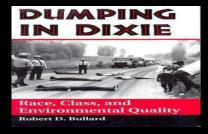
SANKOFA



Go Back and Get It















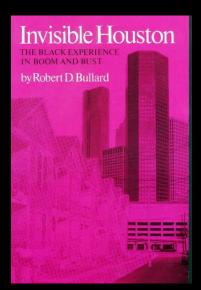
CONNECTING THE DOTS

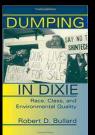


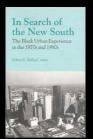
HBCUS MUST CONTINUE TO LEAD IN DEVELOPING THE NEXT GENERATION **OF ENVIRONMENTAL AND CLIMATE JUSTICE** EDUCATORS, RESEARCHERS, SCIENTISTS, SCHOLARS, AND PRACTITIONERS.



BOOKS I'VE WRITTEN OVER FOUR DECADES

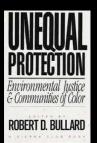




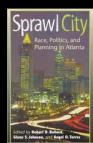




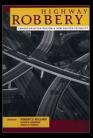








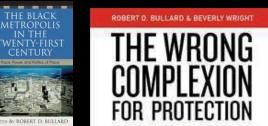










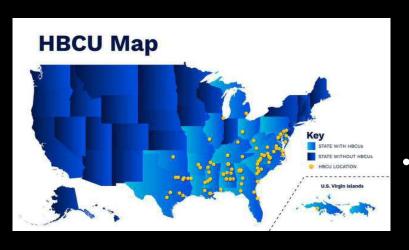




HAVING THE FACTS IS NOT ENOUGH. WE MUST MARRY FACTS WITH ACTION.



HBCUS BLAZED THE EARLY TRAIL IN 1990s



- HBCU graduates conducted the bulk of early EJ research and studies in the 1970s and 1980s that laid the foundation of the modern Environmental Justice Movement, First National People of Color Environmental Leadership Summit, and the "17 Principles of Environmental Justice" ratified in 1991
- The first EJ Centers at U.S. universities were all started at HBCUs in early 1990s (Xavier University, Clark Atlanta University, Hampton University, Florida A&M University, and Texas Southern University)

HBCU CLIMATE CHANGE CONSORTIUM



- In 2011, because of the urgent need to diversify leadership in environmental education and training, research, scholarship, policy and community engagement arena, Dr. Beverly Wright (Executive Director of the Deep South Center for Environmental Justice, Inc.) and Dr. Robert D. Bullard (Dean, Barbara Jordan-Mickey Leland School of Public Affairs at Texas Southern University) launched the HBCU Climate Change Consortium with six schools
- The Consortium now has over half of the 107 HBCUs as members. Our goal is to bring all of the schools into our network.

HBCU CLIMATE CHANGE CONFERENCE



- In 2013, the HBCU Consortium convened the First Annual HBCU Climate Change Conference in New Orleans with 102 participants
- In 2023, the Climate Change Conference had grown to 450 participants, including students, faculty, government scientists, community leaders, and funders

HBCU-CBO GULF COAST EQUITY CONSORTIUM

- HBCU Gulf Coast Equity Consortium was established in 2016 with \$3.2 million grant from W.K. Kellogg Foundation
- Our HBCU-CBO Gulf Coast Equity Consortium started with five HBCUs and five CBOs in TX, LA, MS, AL and FL.
- We leverage resources, partnerships, expertise and lessons learned in our HBCU-CBO Consortium to better direct benefits, investments and funding to our frontline community constituents



SUPPORT FOR HBCU CONSORTIA INFRASTRUCTURE

- Over the decades, our HBCU EJ Centers and Consortia have had limited institutional support for the mentoring pipeline of new teachers, researchers, scholars and community leaders
- In recent years, our HBCU Centers and Consortia have been somewhat successful in attracting public and private funds to support graduate research assistants and post doctoral fellows
- And because of our Annual HBCU Climate Conference, our undergraduate HBCU EJ Climate Corps (funded in 2022 by the Macquarie Group Foundation), we now reach all 42 HBCUs in the Gulf Coast Region and another dozen HBCUs in the Southeast and Mid-Atlantic states





THE WRONG COMPLEXION FOR PROTECTION

How the Government Response to Disaster Endangers African American Communities

ROBERT D. BULLARD and BEVERLY WRIGHT

"[K] nown as the father of environmental justice. . . . Dr. Bullard . . . is one of the foremost experts of environmental justice in the world."

— THE NEW YORK TIMES

Will Government Response to Climate Change Be Fair?

- Government response to natural and human-made disasters over the past eight decades has not treated all communities fairly.
- Will the response to the climate crisis be any different?

The Future of Academic Research on Climate Solutions

March 2022

Follow the Academic Research Dollars on Climate Solutions

- HBCUs received less than 1% of the \$1.2 billion Academic Research on Climate Solution (ARCS) funding in FY 2019 and FY 2020 (Second Nature 2022)
- HBCUs and Black communities are being left out and left behind

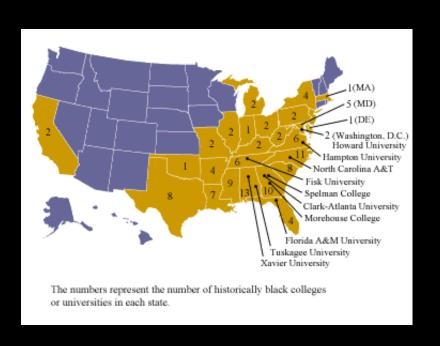
Philanthropy's "One Percent" Equity Problem

- Organizations led by people of color received less than 1 percent of the multiyear operational budget grants awarded in 2021 (Green 2.0 2022)
- Half of philanthropic funding on climate issues goes to 20 national organizations of which 90% are led by white people, 80% by men (Solutions Project 2019)



A DISPROPORTIONATE SHARE OF HBCUS ARE LOCATED IN THE MOST CLIMATE VULNERABLE REGION OF THE UNITED STATES

Location of Black Colleges



- There are 107 historically Black colleges and universities (HBCUs) in the United States
- Most HBCUs are located in the South, former slave states that formed the Confederacy
- 42 of the 107 (39%) HBCUs are located in the five Gulf Coast states

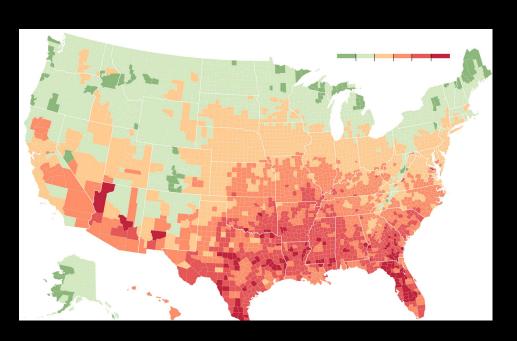
Climate Vulnerability Index



- The Climate Vulnerability Index (CVI) found 10 of the country's most vulnerable counties are in the South, many along the <u>Gulf Coast</u>, where there are high rates of poverty and health problems.
- Half are in Louisiana, which faces dangers from flooding, hurricanes, and industrial pollution.
- St. John the Baptist Parish ranks as the most vulnerable county in the U.S.

Source: Lewis et al. (2023)

Climate Change Will Hit the Poorest Regions and Poorest People Hardest



- A 2017 UC Berkeley study found without effective climate action, the nation, as a whole, could see as much as 1.2 percent shaved off of its GDP per +1°C on average by the end of this century
- Parts of the American South hit hardest with up to a 20 percent decline in economic activity due to global warming by the end of the century

Source: Hsiang et al. (2017)





CLIMATE CHANGE AND SOCIAL VULNERABILITY IN THE UNITED STATES

A Focus on Six Impacts

SEPTEMBER 2021

Climate Change Hits People of Color Hardest

- Climate change impacts fall disproportionately on people of color communities who are least able to prepare for, and recover from heat waves, poor air quality, flooding, and other impacts, according to a 2021 EPA report
- Black Americans are 34% more likely to currently live in areas with the highest projected increases in childhood asthma diagnoses and 40% more likely to currently live in areas with the highest projected increases in extreme temperature related deaths
- Latinos are 43% more likely to live in communities that would lose work hours due to intense heat and 50% more likely to live in areas with the highest estimated increases in traffic delays due to coastal flooding
- American Indians and Alaska Natives are 48% more likely to live in areas that will be inundated by flooding from sea level rise

Source: US EPA (2021)

EJ Reaches the White House February 11, 1994

- On February 11, 1994, President Clinton signed Executive Order 12898
- EO 12898 reinforced existing two existing laws, Title VI of the Civil Rights Act of 1964 and the National Environmental Policy Act of 1969
- Present at the EO signing in the Oval Office were cabinet officials, 4 members of Congress, 4 grassroots EJ leaders, a lawyer, and two sociologists







PRESIDENT BIDEN SIGNS ENVIRONMENTAL JUSTICE EXECUTIVE ORDER 14097 (APRIL 21, 2023)



Congress passes the Inflation Reduction Act (IRA) with \$370 billion for Climate Change

The IRA allocates an historic \$60 billion for Environmental Justice and another \$60 billion for clean energy transition



©Photograph by Reuters

President Biden's JUSTICE40 Initiative





- President Biden's "Justice40"
 Initiative is a plan to deliver 40%
 of the overall benefits of
 climate investments to
 disadvantaged communities environmental justice
 communities that historically
 have been left behind
 economically and overly
 polluted.
- Develop and implement crosssector and interdisciplinary initiatives that place justice and equity at the center

HBCU PROVEN TRACK RECORD

- Our HBCU EJ Center and Consortia Model has a proven track record on environmental and climate justice work under the IRA
- Bullard Center and ACTS community based organization won \$50 million EPA Thriving Communities Grantmakers Award
- Bullard Center and Clean Energy Fund of Texas won \$156 million EPA Solar for All grant
- Deep South Center won \$13 million EPA Thriving Community Technical Assistance Grant



THREE TAKE AWAY MESSAGES TODAY

- Acknowledge the work and outsize role HBCU EJ Centers and HBCU Consortia have played and continue to play in the environmental and climate justice field (education, research, scholarship, community engagement and advocacy)
- Support the buildout and strengthening of our unique HBCU "Communiversity" research to action model that places climate vulnerable populations and community at the center
- Create a Special Endowment Fund to help institutionalize our HBCU EJ Centers and HBCU-CBO Consortia Model that supports climate-focused research to action work



Thank You!

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03

Keynote Address

MSI/HBCU Community-Engaged Climate and Health Research in U.S Gulf Coast: What's the current status?



Robert BullardDistinguished Professor

Texas Southern University





Panel 1

MSI Perspectives on Climate Impacts on Communities and Health in the Gulf



Shamarial Roberson CEO DSR Public Health Foundation



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In what ways can community engagement be deepened to better prepare for climate-related disasters, especially in underserved or marginalized communities that are disproportionately affected?

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Building Health and Climate Research Capacity in the U.S. Gulf Coast: Elevating HBCUs and MSIs as Key Partners

October 29, 2024













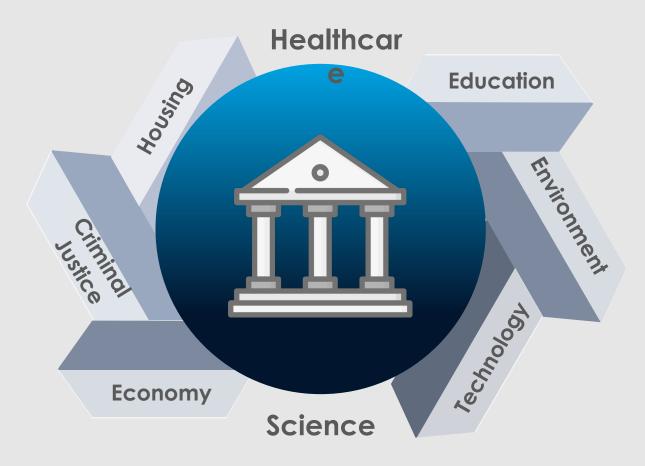


HOMELAND SECURITY AND EMERGENCY MANAGEMENT PROFESSIONAL/PRACADEMIC

Equity Definition

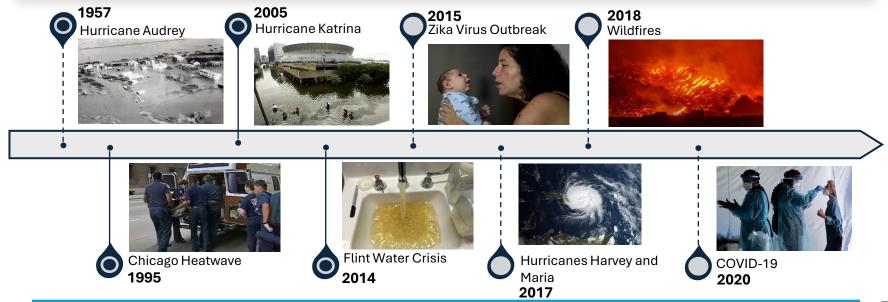
The effort to provide different levels of support based on an individual's or group's needs to achieve fairness in outcomes. Working to achieve equity acknowledges unequal starting places and the need to correct the imbalance.





Legacy of Inequities in Public Policy & Services

Historical Inequity Failures and Disproportionate Impacts on Marginalized Communities During Disasters and Public Health Emergencies



Great Mississippi Flood of 1927

"The camps in which we found the most satisfactory conditions were those where the local colored people have had an opportunity to assist in the administration of affairs. The camps which were found to be especially good were: Baton Rouge, Lafayette, and Natchez.



The Final Report of the Colored Advisory Commission

> Mississippi Valley Flood Disaster, 1927

The American National Red Cross Washington D. C.



Root Causes of Disaster Vulnerability

- Environmental Injustices heightens negative health impacts.
- Discriminatory housing policies increases likelihood of exposure to natural hazards.
- Systemic inequities such as racism, sexism, and discriminatory economic policies.
- Exclusionary and non-inclusive governmental practices limits the ability to prepare, mitigate, response, and recover from disasters.
- Failure to classify suffering of historically marginalized and underserved communities as "emergencies or disasters"
- Disregarding Community-Based Capabilities and Resources

"A system cannot fail those it was never built to protect" - W.E.B DuBois



HBCUs and MSIs (Resilience Hubs)

"Resilience Hubs are community-serving facilities augmented to support residents, coordinate communication, distribute resources, and reduce carbon pollution while enhancing quality of life. Hubs provide an opportunity to effectively work at the nexus of community resilience, emergency management, climate change mitigation, and social equity while providing opportunities for communities to become more self-determining, socially connected, and successful before, during, and after disruptions."

The Urban Sustainability Directors Network (USDN): https://resilience-hub.org/

Historic Examples of HBCUs Serving as Resilience Hubs

- The Great Mississippi Flood of 1927: During this devastating natural disaster, HBCUs like Fisk University in Nashville became sanctuaries for displaced African Americans. The campuses provided shelter, food, and medical care to those affected.
- **Red Summer of 1919**: During the Red Summer, when racial violence erupted across the United States, HBCUs served as refuges for African Americans fleeing white mobs. Institutions such as Howard University became safe havens for those seeking protection.
- **Civil Rights Era**: Throughout the Civil Rights Movement, HBCUs like Alabama State University and Tougaloo College offered refuge to activists and community members under threat of violence. They became strategic centers for organizing and protection.

Recent Examples of HBCUs Serving as Resilience Hubs

- Serve as Community Shelters
- Host Convening on Community Resilience Issues
- Conducting In-depth Research to Address Diverse Challenges
- Leading Door-to-Door Community Outreach and Engagement Programs
- Direct Response efforts to various emergencies and disasters (Hampton University Mobile Vaccine Clinic)



Case Study: COVID-19 Testing, Vaccines, and Treatment

In coordination with an emergency management agency and historically black colleges and universities, a robust culturally competent initiative was launched to promote access to COVID-19 testing and vaccines in minority and disadvantaged communities. Over the course of two months, outreach activities engaged more than 2,000 community partners, faith-based organizations, local businesses, and elected officials. Additionally, through a multi-channel targeted marketing campaign, over six million households received life-saving, accurate information on COVID-19 mitigation strategies, tailored to resonate with diverse cultural perspectives and address specific community needs.

Objectives:

- Enhance vaccination education and awareness within minority communities.
- Promote trust and transparency through culturally competent outreach and multi-sector partnerships.
- Engage communities directly to address public health issues.





Recognize long history of HBCUs and MSIs building community resilience with little support or funding.

• Include HBCUs and MSI in local, regional, and state Hazard Mitigation plans. The Path Forward: HBCU Prioritize hazard mitigation, adaptation, resilience-funding for HBCUs and MSIs.

and MSIs as

Resilience Hubsequitable preparedness, mitigation, response, and recovery strategies to systemically change and improve EM efforts.

- Update antiquated laws and disaster programs that prevents collaboration or innovative funding models with HBCUs and MSIs.
- Continue to Identify opportunities (via equitable funding) to integrate community-based emergency management efforts before, during, and after disasters at HBCUs and MSI.
- Leverage HBCUs and MSIs to build and train community-based workforce of emergency management and public health professionals to lead local disaster preparedness, mitigation, response and recovery efforts.

Thank you!







Curtis Brown, Homeland Security and Emergency Management Professional Curtis.Brown@besyndicate.com



Building Health and Climate Research Capacity in the U.S. Gulf Coast: Elevating Minority-Serving Institutions as Key Partners (Workshop 1)

The National Academy of Sciences October 29, 2024



THE NACHC MISSION

America's Voice for Community Health Care

The National Association of Community Health Centers (NACHC) was founded in 1971 to promote efficient, high quality, comprehensive health care that is accessible, culturally and linguistically competent, community directed, and patient centered for all.









Our Legacy

Health centers carry on the legacy of the Civil Rights advocates who founded the health center movement by:

- Providing care for the under/uninsured
- Addressing social service needs outside the traditional practice of medicine
- And involving patients in the governance of centers





Health Center Board Composition Requirements

- Boards size can range in size from 9 to 25 members
- At least 51% must be patients served by the center
- Include community representatives selected for their expertise in relevant areas
- No more than half of the non-patient board members can derive 10% of annual income from health care industry
- CEO may be non-voting ex-officio board member
- Members may not be health center employees or the spouse or child, parent, brother, or sister by blood or marriage of an employee
- If a health center receives an award to serve special populations, these populations should also have representation on the board







Section 330 of the Public Health Service Act (42 U.S.C. §254b)

Sub-Section b)(2)authorizes health centers to provide additional services necessary for the adequate support of primary health services including environmental health services, including— (i) the detection and alleviation of unhealthful conditions associated with—











Soul City, Warren Co., NC 1982

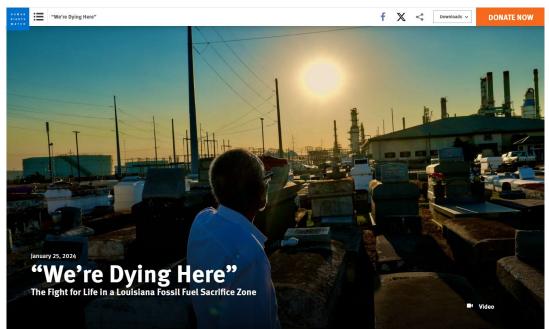




North Carolina State Troopers pick up protestors on the road to the Warren County Landfill on September 17, 1982. The protestors, who sat on the road with their arms locked, were upset over the dumping of PCB-laden dirt in the landfill. AP Photo/Steve Helber



Cancer Alley, Louisiana 2024





■ In this photo from Oct. 23, 2018, the Rev. William Barber, co-chair of the Poor People's Campaign — A National Call For a Moral Revival, addresses a crowd protesting environmental racism in St. James Parish and the rest of the Mississipia River conflow known as "Cancer Alley," Standing behind Sarber in the red shirt and clerical collar is Rev. Dr. Liz Theoharis, the other co-chair of the Poor People's Campaign (Photo courtes) of Severe Pavey).







AMERICA'S HEALTH CENTERS

AUGUST 2024

Community Health Centers are nonprofit, patient-governed organizations that provide high-quality, comprehensive primary health care to America's medically underserved communities, serving all patients regardless of income or insurance status.

Nearly 1,500 Community Health Center grantees and Look-Alikes provided care at over 16,000 locations across the country in 2023. In 2023, health centers served a record-breaking number of patients!

Nearly

32.5M patients

meaning that

1 in 10 people are
health center patients



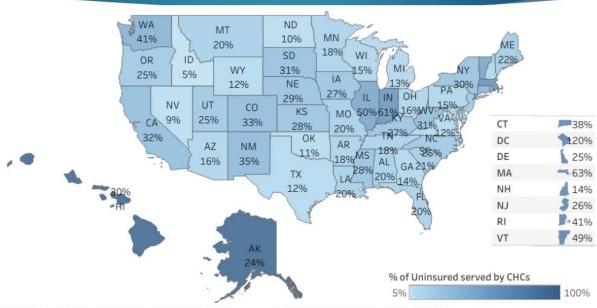
20

► Health centers serve 1 in 11 people in the U.S., 1 in 3 people living in poverty, and 1 in 4 racial and ethnic minorities.



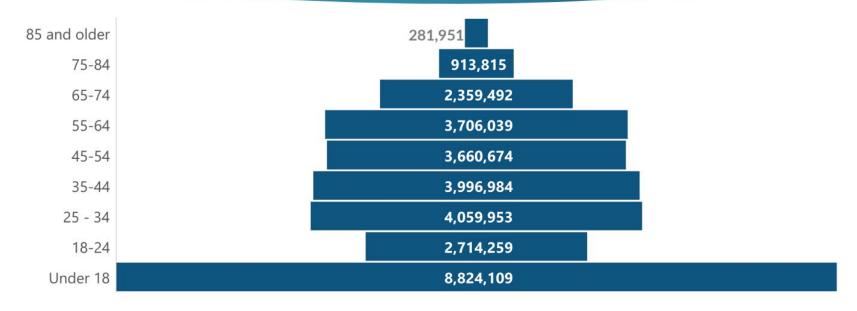
Sources: 2022 Uniform Data System, HRSA, DHHS.

▶ Health centers provide care to 21% of all uninsured individuals

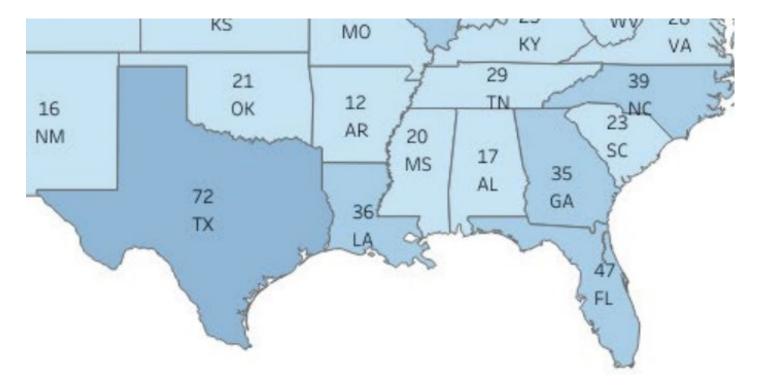


- Notes: Data not available for DC, Puerto Rico, and other island territories. Please contact research@nachc.org with questions
- Sources: (1) 2022 Uniform Data System, Bureau of Primary Health Care, HRSA, DHHS. (2) Kaiser Family Foundation, Health Insurance Coverage of the Total Population, 2022.

- ▶ Health centers saw over 8 million children (under the age of 18) in 2022.
- ▶ The percentage of patients who are under 18 declined slightly from 31% to 29% in (2021-2022).



Community Health Center Organizations in the Gulf Region







PRIMARY CARE ASSOCIATIONS AND HEALTH CENTER CONTROLLED NETWORKS

PRIMARY CARE ASSOCIATIONS (PCAs)

- across the country
 including regional and bi-states
- ➤ Federal grantees (HRSA) as well as member driven organizations
- Have extremely strong political relationships with states—especially with Medicaid, State Health Departments, Governors Office and Legislatures
- Assist with FQHC 330 grant compliance

HEALTH CENTER CONTROLLED NETWORKS (HCCNs)

- across the country
- ➤ 3 or more health centers formally working together: IT, billing, clinical quality, etc.
- Not all HCCNs receive federal funding, some are EHR vendor specific & cross state lines
- ➤ A focus on meeting the strategic needs of changing health care delivery system(s)

nachc.c

Health Center Controlled Networks

Services and Capabilities

- Data analytics to support quality measurement and improvement.
- Increase patients' access to their personal health data
- Improve patients' engagement with their health care team
- Increase the use of national standards to share patient information securely with key partners
- Use both clinical and non-clinical data to improve and coordinate care
- Use social determinants of health to improve both population and patient health.

Health Center Controlled Networks Gulf States:

Alabama Primary Health Care Association Inc.	Montgomery	AL
Health Choice Network, Inc.	Doral	FL
Louisiana Primary Care Association Inc	Baton Rouge	LA
Mississippi Health Safe Net	Jackson	MS
Texas Association Of Community Health Centers Inc	Austin	TX



Gulf State Examples of CHC Environmental Health Initiatives

Florida

Florida Association of CHCs conducted a comprehensive survey of CHCs and their climate resilience and emergency preparedness capabilities.

Mississippi

Mississippi Primary Care Association working in coalition to address Jackson MS water contamination.

Louisiana

Louisiana Primary Care Association partnering with the Environmental Defense Fund, Deep South Center for EJ, and others to study the impacts of tropic storms and petrochemical plants on health of CHC patients.

Texas

Texas Primary Care
Association partnering
with the Environmental
Defense Fund, Texas
Southern Univ., and
others to study the
impacts of tropic storms
and petrochemical
plants on health of CHC
patients.



Advantages to Collaborating with Community Health Centers

- 1) Community Health Centers (CHCs) were born out of the Civil Rights Movement.
- 2) The CHC Movement and the Environmental Justice Movement share common linage and sentinel moments.
- 3) CHCs serve the people often hit first and worst by environmental disasters and have the most difficulty recovery.
- CHCs are statutorily authorized to address environmental issues impacting the health of their patients.
- 5) CHCs are governed by the community residents that use their services.
- 6) Many CHCs participate in Health Center Controlled Networks that can aggregate data and deploy population health analytics to identify disease disparities.
- 7) CHCs in the Gulf region are increasingly engaging in environmental initiatives.

NACHC INITIATIVES

INTEREST GROUP



CLIMATE FOR HEALTH AMBASSADOR PROGRAM



EXTREME HEAT
& CLIMATEFUELED
WEATHER
EVENTS



SOLAR+ STORAGE



Webpage:

https://www.nachc.org/ab out-nachc/ourwork/environmentalhealth/





E. Benjamin Money, Jr., MPH Senior Vice President, Population Health National Association of Community Health Centers bmoney@nachc.org



PLEASE VISIT US ONLINE

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Public Health Emergency Preparedness







Building A Resilient Community Together



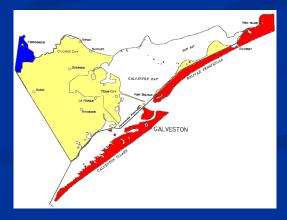






Galveston County





The Great Storm



Texas City Disaster



Public Health Threats - Weather

- Hurricanes
- Flood
- Heat
- Tornadoes





Hurricane Ike, Bolivar Peninsula.

Public Health Threats - Chemical

- Manufacturing explosion/release
- Transportation
- incident (truck, rail, ship or pipeline)
- Intentional release such as the Sarin gas release in Tokyo 1995





Public Health Threats Infectious Diseases

- COVID
- Zika/ West Nile Virus
- Ebola
- MERS Co-V

- Influenza
- Marburg
- Monkey Pox



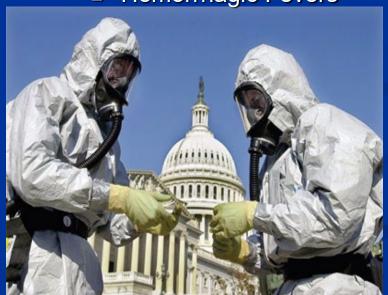


Public Health Threats – Bioterrorism

- Bacterial Agents
 - Anthrax
 - Botulism
 - Brucellosis
 - Plague
 - Tularemia

- Viral Agents
 - Small Pox
 - Hemorrhagic Fevers





HOW TO PREPARE?

Community Engagement



Churches

Chamber of Commerce

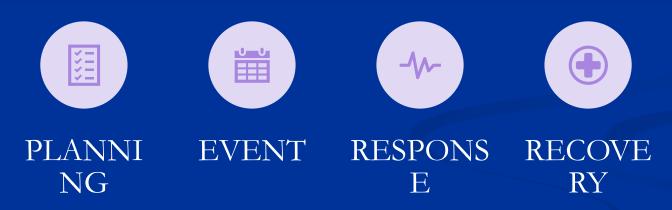
Community Organizations

Governments

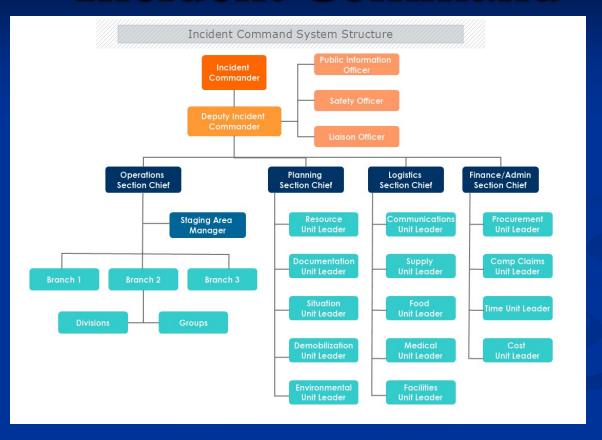
Hospitals

Medical Reserve Corp

Stages of a Disaster



Incident Command



Key Actions in Emergency



- Get People Out of Danger!
- Provide for BasicNeeds
 - Food, Clothing,Shelter
- Medical Care
- Relocation

Q&A





Panel 2

MSI and HBCU Institutional Research Expertise, Capacities, and Infrastructure



Paul Tchounwou

Dean of the School of Computer,
Mathematical, and Natural
Sciences

Morgan State University

Panel 2 - MSI and HBCU Institutional Research Expertise, Capacities, and Infrastructure

Goal - This panel will explore the diverse and multifaceted research capacities and infrastructures at Minority-Serving Institutions (MSIs) and Historically Black Colleges and Universities (HBCUs)

Focus Areas

- Funding opportunities/options
- Research infrastructure and research program development
- Workforce development
- Impact of R1/non-R1 status
- Outcome We anticipate that the discussion will highlight the distinctive challenges faced by both public and private institutions, particularly in relation to funding dynamics and political pressures.



Join at slido.com #4255670





What kinds of support would you need as a researcher from an institution to conduct community-engaged research in climate or disaster-prone areas?

i Start presenting to display the poll results on this slide.

"Resilience, Recovery, and Research-Strengthening Disaster Response at Florida A&M University and Minority-Serving Institutions"

Ashley H. Davis

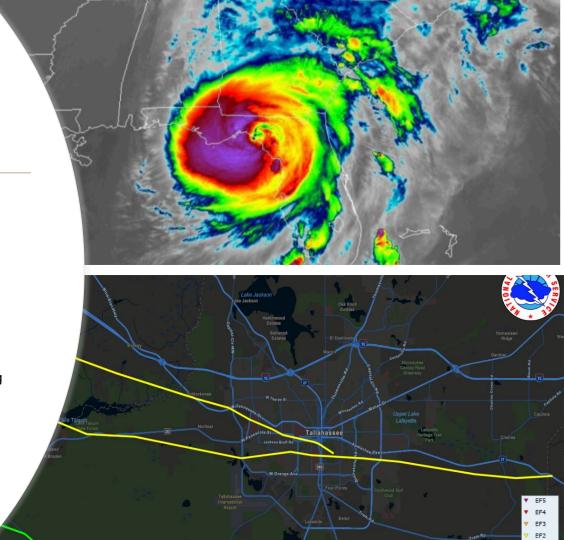
Director of Emergency Management &

Assistant Vice President at Florida A&M University

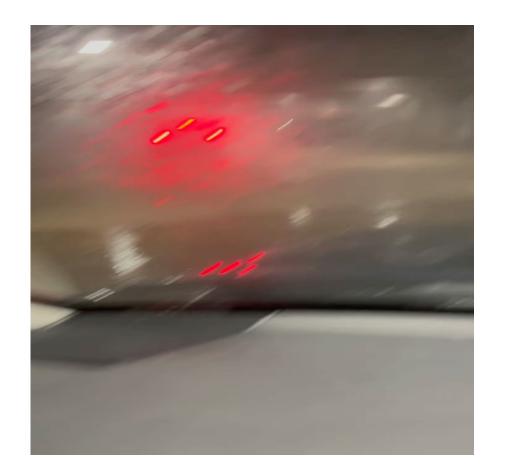


Overview of Disasters and Impacts on FAMU

- May 10 Tornadoes
 - Impact on FAMU's infrastructure, operations, and community
 - Recovery efforts and the long-term effects on the university's academic and operational framework
 - Estimated 10-15 Million Dollars in damages
- 2024 Hurricane Season
 - Overview of each storm's impact, emphasizing the vulnerability of FAMU and surrounding communities to climate-related disasters



May 10, 2024, Tornadoes



Response and Recovery Efforts: Building Capacity

- · Immediate Response
 - FAMU leveraged its institutional resources and community connections during the tornadoes and hurricanes (local, state, federal, and private sector).
 - The role of MSIs in strengthening disaster response for underserved communities
- Ongoing Recovery and Infrastructure Rebuilding
 - FAMU's recovery projects focus on climate-resilient infrastructure (mitigation grants)



Urban Search & Rescue Team

Multiple states



Operational Impact of Disasters at FAMU

Normal Operations Affected:

- Shifts to remote learning or temporary closures
- Rescheduling of campus events and activities
- Deployment of resources for emergency sheltering (e.g., Al Lawson Center)

Continuity Plans:

- Activation of emergency communication systems (e.g., FAMUALERT)
- Prioritization of critical functions (e.g., housing, food services, and public safety)





Successes at FAMU in disaster preparedness, response, and research contributions to the Gulf Coast's climate resilience

Institutional Strengths



How MSIs can lead communitybased operations with appropriate resources and support



Insights into how the broader research community in strengthening disaster research and response capacities

Conclusion

Q&A Session





ASSOCIATE VICE PRESIDENT FOR ACADEMIC AFFAIRS/

ASSOCIATE PROFESSOR OF BIOLOGY/BIOINFORMATICS



RESEARCH

INFRASTRUCTURE

CAPACITY

EXPERTISE

INFRASTRUCTURE







DIGITAL INFRASTRUCTURES



FACILITIES



KNOWLEDGE-BASED RESOURCES



CAPACITY

Culture transitions

Grant management Processes

Connection to SLOs

Networking



EXPERTISE

- SUBJECT MATTER
 - DATA ANALYSIS
 - TECHNICALWRITING/COMMUNICATION
 - IT INFRASTRUCTURE
- DEPTH OF KNOWLEDGE
- COLLABORATIONS







UNIVERSITY CONTEXT

Fall 2023	OLLU
Current total student population	2,096
Current underserved populations (%)	79
Retention rate (%)	58
Low income/Pell Eligible (%)	57
First generation (%)	39
Number of undergraduate science majors	109
Undergraduate science majors - underserved populations (%)	84
Science Females (%)	78
Science First generation (%)	34



RESEARCH CAPACITY & INSTITUTIONAL SUPPORT

- Small, catholic institution
- First designated HSI
- Graduate Programs
- Private University
 - SB17
- Directed Studies (UG)

Doctorate	MS/MFA/MBA
Psychology	Business (various)
Leadership	English (various)
Speech Language Pathology	Communication Sciences and Disorders
	Social Work
	Cybersecurity
	Education



FACULTY AND STUDENT BUY-IN

- Teaching Focused
- Current Grants
- McNair Program
- CURE Workshop
- Strong faculty-student relationships
- DS Courses High Demand





LIMITATIONS

Faculty

- Teaching loads
- OSP
- Lack of Staff/Turnover
- DS Courses
- STEM specific
 - No graduate students
 - Infrastructure limitations

Students

- Financial obligations
- First Generation
- Lack of Opportunities
- Language barriers
- Retention



FUTURE DIRECTIONS

- New STEM building
- New graduate programs
 - KINE
 - ESS?
- Changes to faculty evaluation
- Center for Community Futures
- Program cuts





Elevating JSU's Research Status

ConSandra McNeil, Ph.D.

Interim Vice President for Research and Economic Development

Jackson State University



Current Research Infrastructure

- An annual average of \$50M in externally funded grants and contracts.
- Research Capabilities Include: Cybersecurity, Materials Science and Engineering, Health Disparities, Artificial Intelligence and Data Science
- 5 Core Laboratories
- 5 Colleges: College of Business, College of Education and Human Development, College of Liberal Arts, College of Health Sciences, and College of Science, Engineering and Technology

Some Major Centers and Programs

- RCMI Center for Health Disparities Research
- Jackson Heart Study Graduate Training and Education Center (GTEC)
- Coastal Resilience Center for Excellence
- Cybersecurity for AI and Data Science Certificate Program
- Critical Infrastructure Cyber Protection Program with ERDC

Potential Impact of the Jackson Research Lab

- Attract a critical mass of researchers and students
- Increase JSU's research expenditures and potentially lead to R1 status
- Increase research funding in AI, Cybersecurity, Data Science, and other tech areas.
- Increase collaborations with Mississippi institutions and local businesses
- JSU can help increase societal impact; and contribute to workforce development and economic development needs and strategies.

Roads to R1

Faculty Programs

Research Engagement Week

Webinars

• Faculty Seed Grant Program

Faculty Research Leadership Program

• Grant Writing Coaching Program

Evaluation Network Program

Faculty Travel Program

Workshops

Research Expenditures - 3 Year Trend

	2020	2021	2022	2023	2024
NSF HERD Data	\$15,081,000	\$16,157,000	\$17,481,000	N/A	N/A
JSU Research Expenditures	33,645,861	\$63,067,157	\$68,933,933	\$58,614,011	\$46,485,218

The HERD Survey is the primary source of information on research and development expenditures at U.S. colleges and universities.

Variables of the NSF HERD Survey

- R&D expenditures by field and source of funds (i.e., federal government, state and local government, business, nonprofit, institutional, and other)
- R&D expenditures funded from foreign sources
- R&D expenditures within medical schools
- Clinical trial R&D expenditures (Phases I–III)
- R&D expenditures by type of R&D (i.e., basic research, applied research, and experimental development)
- · Total and federally funded R&D expenditures passed through to subrecipients or received as a subrecipient
- Federally funded R&D expenditures by field and federal agency
- R&D expenditures by cost categories (e.g., salaries, software, equipment, indirect costs)
- · Total and federally funded R&D equipment expenditures by field
- · Headcounts and full-time equivalents of R&D personnel functions (researchers, R&D technicians, and R&D support staff)
- Institutional characteristics (i.e., highest degree granted, historically Black college or university [HBCU], high Hispanic enrollment [HHE], public or private control)
- Geographic location within the United States

GAPS

- Competitive Salary to Attract (and Retain) More Research Faculty, Staff, and Post Docs
- Access to More Cutting-Edge Instrumentation and Improved Labs
- Capacity Building Dollars Federal

Discussion Questions

- What unique challenges do HBCUs and MSIs face in developing research programs and infrastructure due to political, social, and economic pressures, and how have your institutions navigated these challenges?
- How does the limited research infrastructure at some HBCUs and MSIs affect their ability to compete in large-scale, collaborative research projects, and what innovative solutions have you seen implemented to overcome these barriers?
- What strategies have you found effective in expanding research expertise at your institution, particularly in areas where MSIs may not have had historical strengths?

Q&A

06

Panel 3

Exploring Opportunities for Building Research Capacity in Climate, Health, and Resilience in Gulf



Erin Lynch
President

Quality Education for Minorities





What gaps do you believe MSIs can fill in climate and health research?

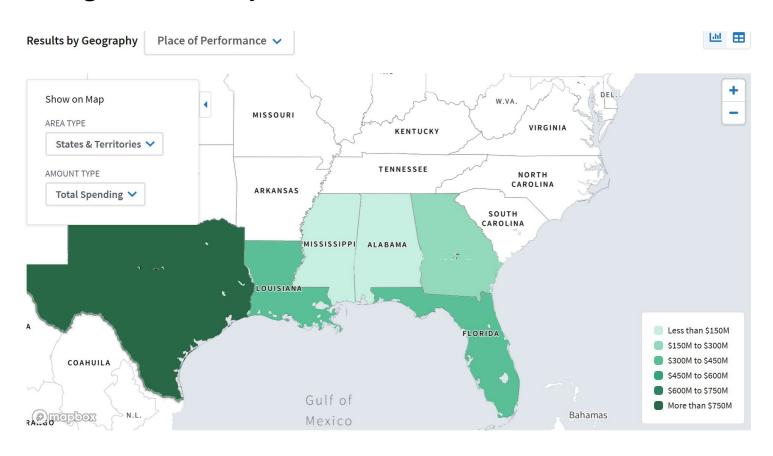
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Gulf Coast Federal Funding Landscape Analysis

Building Health Capacity in the U.S. Gulf Cost: Elevating Minority-Serving Institutions as Key Partners

Erin Lynch, Ph.D, EdD, CRA

Federal Obligations (grants) related to public health data system, climate change, community resilience, and environmental stressors





We respectfully begin by acknowledging our convening is located on the ancestral lands of the Akokisa tribe and Atakapa people. We recognize the Nations of the Cherokee and Atakapa who continue to live in the surrounding areas of Houston and Louisiana. As academics, it is our responsibility to acknowledge the sovereignty and the traditional territories of these tribal nations, and the treaties that were used to remove these tribal nations, and the histories of dispossession that have allowed for the growth of our academic institution. Consistent with the QEM's commitment to diversity, equity, inclusion, and belonging, we acknowledge the historical and current experiences of Native peoples as it helps inform the work we do.

All Federal Obligations by Funding Type for public health data system, climate change, community resilience, and environmental stressors work

ASSISTANCE_TYPE_DESCRIPTION

■ COOPERATIVE AGREEMENT (B)

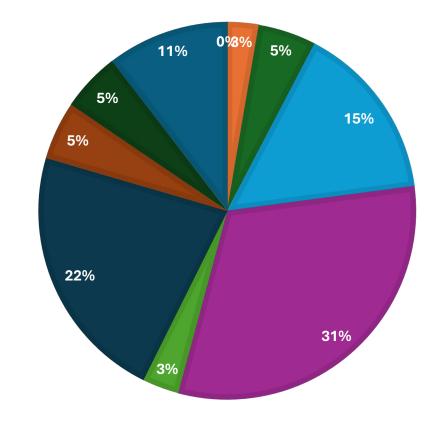
■ DIRECT LOAN (E)

- DIRECT PAYMENT FOR SPECIFIED USE, AS A SUBSIDY OR OTHER NON-REIMBURSABLE DIRECT FINANCIAL AID (C)
- DIRECT PAYMENT WITH

 UNRESTRICTED USE (RETIREMENT,

 PENSION, VETERANS BENEFITS,

 ETC.) (D)



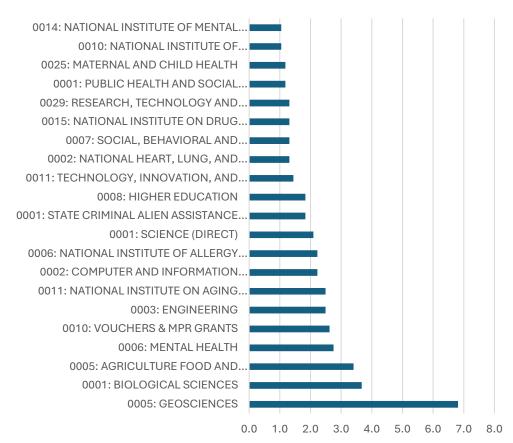
Analysis of Object Class 41.0 Grant, Subsidies, 0001: COMMUNITY DEVELOPMENT FORMULA GRANTS Contributions program_activities_funding_this_award 0001: DIRECT COMPONENT ■0001: HIGHWAY INFRASTRUCTURE PROGRAMS 0001: PAYMENTS TO STATES FOR SPORT FISH RESTORATION ■0001: PAYMENTS UNDER THE HATCH ACT ■0001: SMITH-LEVER ACT, 3(B) AND 3(C) ■0001: STATE WILDLIFE GRANTS ■0002: COOPERATIVE FORESTRY RESEARCH 0003: PAYMENTS TO 1890 COLLEGES AND TUSKEGEE UNIV. AND WEST VIRGINIA STATE UNIVERSITY 0005: SEC. 154 / SEC. 164 ■0005: WILDLIFE RESTORATION GRANTS ■0006: ANIMAL HEALTH AND DISEASE RESEARCH 0010: SENIORS AND PERSONS WITH DISABILITIES; 0017: IIJA ACT. 2021 ■0010: SURFACE TRANSPORTATION BLOCK GRANT PROGRAM ■0011: 2022 BIPARTISAN INFRASTRUCTURE LAW (P.L. 117-58) 0013: PAYMENTS TO 1890 COLLEGES AND TUSKEGEE UNIV. AND WEST VIRGINIA STATE UNIVERSITY 0014: NATIONAL HIGHWAY PERFORMANCE PROGRAM ■0015: CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM ■ 0015: RENEWABLE RESOURCES EXTENSION ACT 0016: HIGHWAY SAFETY IMPROVEMENT PROGRAM ■0017: METROPOLITAN PLANNING PROGRAM 0018: TRANSPORTATION ALTERNATIVES ■0029: RESEARCH, TECHNOLOGY AND EDUCATION PROGRAM ■0040: PROTECT FORMULA PROGRAM ■0043: PROJECT SAFE NEIGHBORHOODS ■0058: OTHER PROGRAMS ■0110: CAPITAL FUNDS GRANTS ■0117: INDEPENDENT LIVING EDUCATION AND TRAINING VOUCHERS ■0143: STOP SCHOOL VIOLENCE ACT ■0211: EXEMPT PROGRAMS 0550: HOMELESS ASSISTANCE GRANTS (DIRECT)

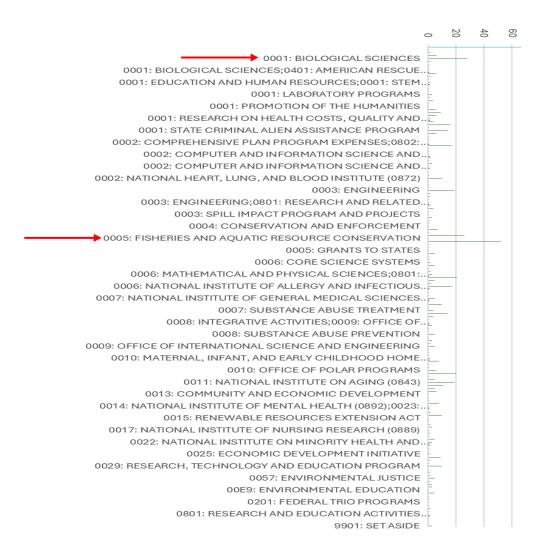
Analysis of Object Class 41.0 Grant, Subsidies, Contributions

Top Project Grant Funding Categories

Major Topics

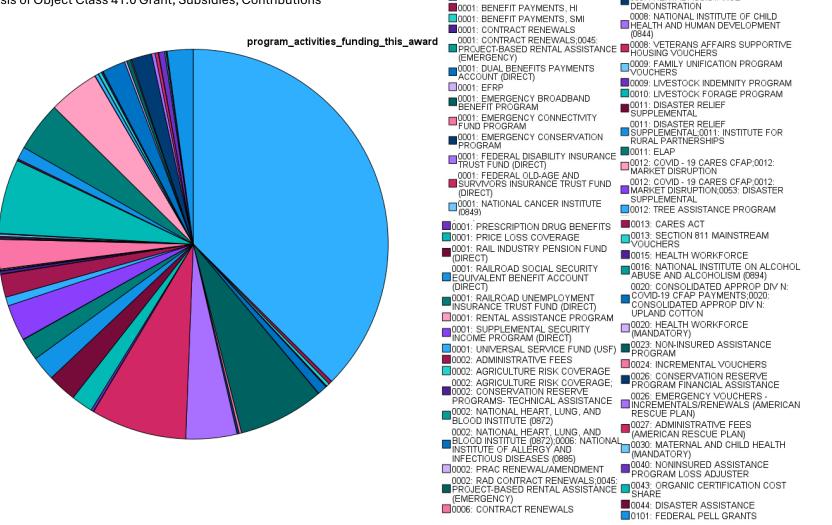
- Agricultural Impacts (Agricultural Pest Survey; soil research; food system; crop resilience)
- Infrastructure (cyber systems; road structures; Stormwater management and infrastructure)
- Social Impacts (Homelessness Diversion; interdisciplinary urban resilience)
- · Health Sciences (biomarkers, ...
- Environmental Sciences (climate adaptation and conservation efforts)





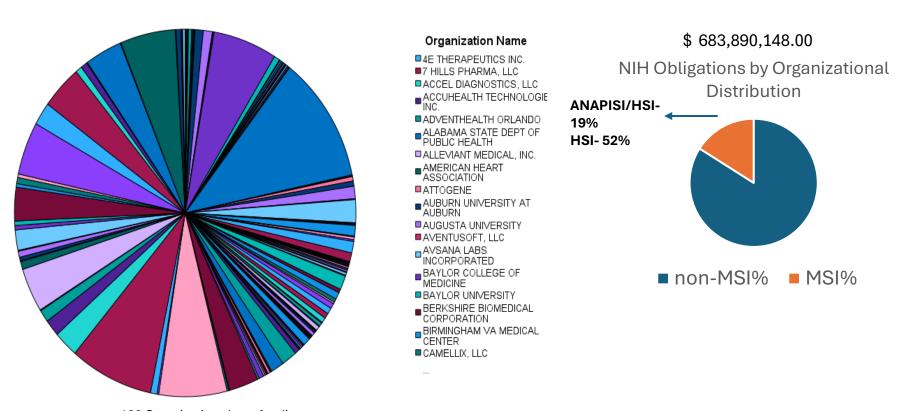
Analysis of Object Class 41.0 Grant, Subsidies, Contributions

Analysis of Object Class 41.0 Grant, Subsidies, Contributions



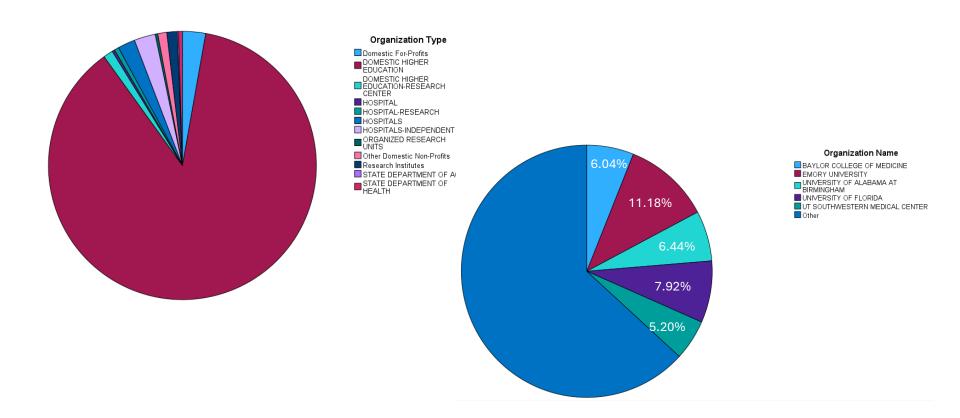
■0007: RENTAL ASSISTANCE

NIH Federal Obligations by Organizational Type for public health data system, climate change, community resilience, and environmental stressors



133 Organizations have funding

NIH Federal Obligations by Organizational Type (figure 1) and School (Figure 2) for public health data system, climate change, community resilience, and environmental stressors







Climate, Resilience, and Health Research Gaps in the Gulf: Opportunities for Minority-serving Institutions

Rebecca A. Efroymson Oak Ridge National Laboratory, Oak Ridge Tennessee

10/29/2024

NASEM meeting: Building Health and Climate Research Capacity in the U.S. Gulf Coast: Elevating Minority-Serving Institutions as Key Partners

Contributors: Christa Brelsford (Los Alamos National Lab), Craig Colten (Louisiana State University, emeritus), Leah Dundon (Vanderbilt University), Bandana Kar (National Renewable Energy Lab)



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FOR THE US DEPARTMENT OF ENERGY



Charge to the Panel

Panel Title: Exploring Opportunities for Building Research Capacity in Climate, Health, and Resilience in Gulf

To present current research gaps in climate, health, and resilience research, the assets-based contributions of MSIs, and next steps in application. The session will flow through three phases, aimed at progressively advancing the discussion from gap identification to actionable strategies for securing resources.



Outline

Gaps in climate, **GAPS** health, and resilience research Assets and potential **ASSETS** contributions of MSIs Educational and **PROGRAMS** agency programs and opportunities



Gaps in Research—Some Key Points

- Gaps should be identified, in part, by the affected communities, not just research organizations
- It is important for agencies and foundations to have mechanisms to fund opportunistic research for
 - Extreme events
 - Local environmental health events
 - Resilience and recovery
- Research on mitigation/solutions is as important as research on impacts



Gaps in Climate Research—Example Topics

- Climate impacts
 - Many research needs in <u>Fifth National Climate Assessment</u>
 - Under-investigated sectors/sector dependencies, e.g., housing, agriculture, health, communications
 - Compound events (e.g., 2 hurricanes) and cumulative effects (e.g., high energy burden & event outages affect health burden)
 - Impacts of flooding on water treatment (e.g., Hurricane Ida)
 - · Social effects, e.g., climate migration, decreasing availability of homeowners' insurance
 - How do we foster evacuation culture in inland areas?
 - How do we create and maintain viable, resilient transportation infrastructure to enable safe evacuations?
 - Flood risk research, Five ways to ensure flood-risk research helps the most vulnerable (Hino and Nance 2021)
 - Inequities in exposure to flooding, mitigation
 - Metrics (e.g., losses as a share of household wealth,]flood prevention benefits)
 - Effects of floods on mental and physical health, employment, education
- Integrated assessment models—Do models, mitigation, and adaptation recommendations reflect lived experience?
 - Regional Integrated Assessment Model Framework for Gulf was developed 2010-2015

Gaps in Climate Justice Research from Workshop—Climate and Energy Justice in the South, August 2021

- Mechanisms to establish and support long-term relationships with communities, essential for joint research activities
- Methods of engagement with communities that recognize & overcome challenges while underscoring advantages of multiple voices
- Metrics for justice/equity, "immeasurable factors" related to culture and social relationships (e.g., attachment to place)
- Accessible demographic data at fine spatial scales and with temporal dynamics adequate to reveal anomalies within a census tract that aggregation and averaging can mask
- Data on important justice variables identified by communities, such as resource security, heirs' property, levels of household indebtedness
- Cumulative effects of multiple stressors to frontline, disadvantaged, or vulnerable communities

Institutions: Appalachian Voices, Southeast Energy Efficiency Alliance, Institute for Sustainable Communities, Southern Environmental Law Center, ThreeCubed, InSight Initiative, Appalachian Renewable Resources, Greenpeace, Sierra Club, Southeast Energy Insecurity Stakeholder Initiative, Mount Zion Baptist Church, Knoxville NAACP, Jackson State U, Tennessee State U, Appalachian State U, Cambridge U, Louisiana State U, NC State U, U Michigan, U Tennessee, National Center for Appropriate Technology, Volkswagen, Tennessee Dept of Health, Tennessee Dept of Environment & Conservation, Virginia Dept of Environmental Quality, USDA Forest Service, DOE Bioenergy Technologies Office, DOE Office of Economic Impact and Diversity, EPA Region 6, ORNL



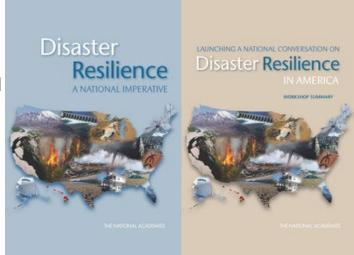
Gaps in Health Research—Example Topics

- Air pollution and health
 - Effects of exposure to multiple chemicals, effects of additional stressors
 - Monitoring—are we capturing concentrations/doses of chemicals at the fence-line? Are there
 handheld monitors that would be easy for non-experts to use?
- Urban heat islands, heat waves, summertime power outages, and health, combined with other health risk factors
 - · Sensors for indoor and outdoor temperature
- Integration of remote sensing and sensors for chemical and heat-related health impacts
- Contaminated drinking water and storms (Hurricane Katrina, 2005; Hurricane Sandy, 2012; Hurricane Harvey, 2017; Hurricane IDA, 2021)—also old infrastructure, saltwater intrusion



Gaps in Resilience Research

- Community-driven preparation, practices that bolster resilience, including short-term responses before FEMA/Red Cross/National Guard arrival (requires community participation research)
- Resilience metrics and spatio-temporal variability, for example, reflecting climate migration
- Energy resilience and extreme events
 - e.g., Power system planning and recovery, integrating multiple energy sources into grid for resilience
- National Academies Reports on Resilience
 - 2011-2013 reports
 - 2024 Lecture about these reports by Susan Cutter, U South Carolina
 - Climate Resilience Information System | GlobalChange.gov
 - NOAA, DOI/USGS, NASA, NSF, USDA, FEMA, DOE, and OSTP
- Climate risk financing





INCREASING NATIONAL RESILIENCE TO HAZARDS AND DISASTERS THE PROPERTY FROM THE GLAP COURT OF LICUSANIA ME MISSISSER





Example Assets of MSIs for Research in Gulf

- Numerous assets (physical science, environmental science, social science) specific to universities/colleges/professors
- Trusted partners of community organizations, long-term relationships
 - MSIs and communities need to benefit from participation
- Long history of environmental justice research (first five EJ centers were at HBCUs, R. Bullard)
- Engaged students and faculty with lived experiences in historically marginalized and overburdened communities
- Culture of collaboration, e.g., annual HBCU Climate Change Conference to share ideas and results
- Locations close to
 - extreme events
 - planned energy and decarbonization facilities



Example Opportunities for Minority-serving Institutions (MSIs)

- · Internship opportunities, e.g.,
 - Summer 2025 Visiting Faculty Program at Oak Ridge National Laboratory, deadline Jan 8, 2025, usually 50% from MSIs, up to 2 students (one grad), potential continuation in spring or fall with teaching buyout, <u>VFP How to Apply | U.S. DOE Office of Science (SC)</u>
 - Education & Internship Opportunities ORNL
 - GEM Fellowship Program GEM Fellowship
- Measurement of climate variables, like urban heat islands (Spelman and GA Tech) and sea-level rise (GA Tech and local partners in Savannah)
- Participation in knowledge co-production, e.g., <u>Equity in Co-Production: Community Science</u>. Journal special issue.
- Helping craft research solicitations by responding to agency Requests for Information (RFIs)—e.g., NOAA seeks public comment to inform more equitable climate service delivery
- Creating community benefits plans for energy projects (new requirement for large DOE-funded energy transition projects) that address health and climate resilience



University of West Georgia Professor Mautusi Mitra (left) and student Chukwuemeka Okpala (center), and ORNL scientist Carrie Eckert







Vanderbilt University's Climate Leaders Academy:

- Reaching under-represented populations in climate and sustainability studies
- Vanderbilt PI: Leah Dundon; collaborating with Oak Ridge National Laboratory
- Providing concrete benefits to increase participation
- Novel, experiential learning
- Using United Nations Framework Convention on Climate Change as learning and discovery platform to train students at the science-policy interface
- Creating "transdisciplinarians" (Cosens, et al 2021)





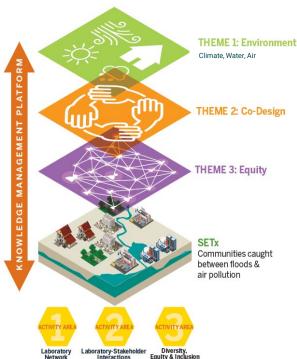
Southeast Texas Urban Integrated Field Laboratory (SETx Urban IFL)

- One of four Urban IFLs to inform equitable climate and energy solutions that can strengthen community-scale resilience across urban landscapes, SETx-UIFL has focus on equitable solutions for communities caught between **floods** and **air pollution**
- Stakeholder knowledge→modeling and scenarios development

Beaumont-Port Arthur Metropolitan Statistical Area



- Which processes and variables need to be captured in regional scale hydrological and atmospheric models so they are representative of conditions experienced by local communities and help inform adaptation strategies?
- How can we understand linkages between & within natural, built, and social systems in urbanized regions to better support natural and human resilience?



Univ Texas at Austin, Lamar University, Texas A&M, Prairie View A&M, Oak Ridge National Lab, Los Alamos National Lab, along with more than 100 stakeholder groups, funded by DOE Office of Science



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Questions? Contact Rebecca Efroymson, Oak Ridge National Laboratory, efroymsonra@ornl.gov





Exploring Opportunities for Building Research Capacity in Climate, Health, and Resilience in the Gulf







*MSIs-A key collaborative to address climate health research gaps

*MSIs= Minority Serving Institutions



Climate Vulnerabilities



Decreased agricultural productivity



Threat to water quantity and quality



impacts on vulnerable communities



Shocks due to extreme climate events



Stress on infrastructure and public lands



About the presenter

- Twenty years of interdisciplinary experience in the environmental field
- Worked in advocacy and education
- An alumna and faculty member at a MSI (HCBU)







What are MSIs???	HBCUs	Historically Black Colleges and Universities	Alabama A & M
	HSIs	Hispanic-Serving Institutions	El Centro College
	AANAPISIs	Asian American and Native American Pacific Islander- serving institutions	Georgia Gwinnett College
	TCUs	Tribal Colleges or Universities	Little Big Horn College
	ANNHs	Alaska Native-serving Institutions or Native Hawaiian-serving Institutions	Pamlico Community College
	NASNTIs	Native American-Serving Nontribal Institutions	New Mexico State University
	PBIs	Predominantly Black Institutions	Shorter University-College of Adult & Professional Programs

Identified Research Gaps in Climate Health Research

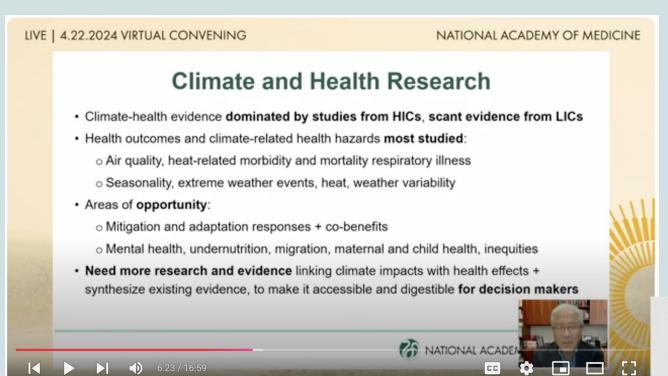
- Health and socioeconomic factors
- Impacts on marginalized communities
- Sea level rise
- Human migration

State of climate and health research in the Special Report on 1.5 degrees developed by the Intergovernmental Panel on Climate Change (IPCC-SR1.5)

The 1.5 Health Report, released by the WHO, summarized the findings of the IPCC-SR1.5 in 2018, outlining the current evidence on the interlinkages between climate change and health. The 1.5 Report summarized the knowledge gaps in climate change and health research that were identified by the IPCC (8,9). These knowledge gaps include the following:

- → health and well-being risks in the context of socioeconomic and climate change, especially in key areas such as occupational health, air quality and infectious disease. [Section 3.1 and 3.7.2]
- → impacts of global and regional climate change on public health, food distribution, nutrition, poverty, tourism and coastal infrastructure, particularly for developing nations. [Section 3.7.2]
- → implications of climate change on livelihoods and poverty, on rural communities, indigenous groups and marginalized people. [Section 3.4.7.1 and 3.7.2]
- \Rightarrow limited focus on regional risks and adaptation options at 1.5 °C and 2 °C, as compared to research on global risks. [Section 3.4.7.1]
- → difference between the impact of 1.5 °C and 2 °C on human health for a range of climate-sensitive health outcomes, such as diarrhoeal diseases, mental health and air quality. [Section 3.1]
- → influence of global warming on human migration. [Section 3.7.2]
- → projected impacts of **sea level rise**, which particularly influence human health, agriculture and water resources of small island nations. [Section 4.3.6]
- → co-benefits and trade-offs when reducing Short-Lived Climate Forcers (such as better health outcomes, agricultural productivity improvements). [Section 4.3.6]
- → scientific literature on climate-SDG interactions which is key for selecting mitigation options that maximize synergies and minimize trade-offs towards the 1.5 °C and sustainable development objectives. [Section 2.5.3]





HBCUs	Total Number: 107**	Number of environmental programs: 20
HSIs	Total Number: 600**	Number of environmental programs: STEM integration
AANAPISIs	Total Number: 199**	Number of environmental programs: unknown
TCUs	Total Number:37**	Number of environmental programs: STEM integration
ANNHs	Total Number: 25**	Number of environmental programs: unknown
NASNTIs	Total Number: 28**	Number of environmental programs: unknown
PBIs	Total Number: 48**	Number of environmental programs: HBCUs



Students demographics at MSIs

- MSIs are generally in close proximity with their prospective communities, which are historically exposed to systemic oppressive measures such as redlining and overexposure to environmental contamination.
 - Urban
 - Rural
- Students are part of frontline communities which gives better perspective on solutions
- Many underrepresented communities major in service based careers to give back to their communities.

Addressing the gaps....

- Although environmental scientists and engineers are on the forefront, the answers to the gaps in the research is interdisciplinary.
- Communities that are mostly impacted are a significant part of the solution.
- MSIs have lower numbers of environmental programs and majors than their PWI (Predominately White Institution) counterparts.
- Students at MSIs do major in other STEM majors (biology, chemistry, math) and also in majors like sociology, nursing, pre-med/medicine
- Important note: Students' exposure to environmental and climate change research can make a significant difference to reduce the gaps.

Solutions are happening.







STEM Transformation Institute

https://engage.aps.org/stepup/about/leadership

CODA PROJECT (COLLABORATIVE DATA ANALYSIS)



Collaborative Data Analysis (CoDA): Science with the People

Mission: Bridge community observations, health data, and policy change to address systemic health inequities in Louisiana.

Vision: Empower Louisiana communities through participatory science and policy-relevant research.

Project Leads:

PIs: Dr. Barbara Allen, Dr. Alison Cohen, Dr. Michelle Smith

CoPI: Dr. Kenya Goodson

· Project Team:

Austin Banks Jr, MBA – Project Manager
Juliet Nussbaum, MPH – Epidemiologist
Dr. Sherman Horn III – Environmental GIS Analyst

CoDA is NSF-funded and coordinated by the Minority Health & Health Equity Research Center, Dillard University.



Exploring Opportunities for Building Research Capacity in Climate, Health, and Resilience in the Gulf







Engagement and Access for Research-Active Institutions (EARA)

Jean Shin, Ph.D., Deputy Director
Office of the Chief Officer for Scientific Workforce Diversity (COSWD)
October 29, 2024



EARA Initiative Strategic Framework

Vision: Address awareness and access barriers that Research-Active Institutions (RAIs) face in enhancing research capacity and infrastructure, accelerating research progress, and addressing disparities in research opportunities and outcomes.

Mission: EARA will serve as a navigation and communication-focused initiative provided to RAIs and NIH Institutes, Centers, and Offices (ICOs) by:

- 1. Providing information about and aiding RAIs in navigating existing NIH resources and opportunities.
- 2. Fostering bilateral engagement and communication between RAIs and NIH ICOs.

Goals:

- 1. Strengthen RAI awareness and utilization of NIH resources and funding opportunities
- 2. Enhance information-sharing and collaboration for RAI engagement and support across NIH ICOs
- 3. Build relationships between NIH and RAIs and broaden participation of RAIs in the NIH ecosystem

Research-Active Institutions (RAIs)

- Have a historical mission to serve populations underrepresented in biomedical and behavioral research.
- Award degrees in the health professions or the sciences related to health, or in STEM fields including social and behavioral sciences.
- Have received an average of no more than \$0 to \$25 million (total costs) of NIH Research Project Grant (RPG) support for the past three fiscal years, including rural institutions in IDeA states; and HBCUs, TCUs, and MSIs in keeping with the CHIPS and Science Act of 2022.

Watch our new video to learn about the EARA initiative



Scan to visit the EARA video

https://diversity.nih.gov/sites/default/files/media-files/video/EARA-full-video-new.mp4



EARA Collaborators

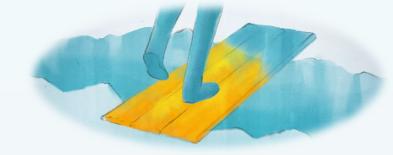
- Advisory Committee/Working Group
 - CSR

- OALM
- NIGMS
- OER

- NIMHD
- Diversity Catalysts
- Receipt and Referral liaisons at each IC



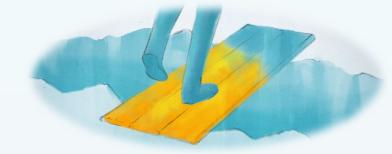
Two-Pronged Approach for EARA



- 1. <u>Baseline general outreach:</u> EARA website and newsletter.
 - Serve as access points for multiple RAIs and investigators.
 - Contain information on announcements, news and resources related to NIH Research Project Grants processes and Notices of Funding Opportunities and updates on EARA.



Two-Pronged Approach for EARA



2. Intensive outreach: EARA Pilot Project

 In 2024 and 2025, COSWD will work intensively with approximately 50 RAIs that volunteered to engage in enhancing their knowledge and utilization of NIH funding opportunities.

FARA **EARA**

GRANT LIFECYCLE

AND THE EARA INITIATIVE



CONCEIVE

Conceive concept based on research expertise and resources.



COLLABORATE

Align partners/ collaborators.



DEVELOP

Develop abstract and specific aims.



· Talk with the program officer (PO) to be assured that the focus aligns.

concept.

- · Gather additional needed information from the PO:
 - Do you need a specific scientific review group (SRG)?

Intensive outreach

MATCH

Find the NIH ICO/NOFO that matches the focus of the research

> Should an additional IC be listed as an option for funding?



APPI Y

Develop and submit a full application.





FOLLOW UP

Follow up with the assigned scientific review officer (SRO) to get timeline and status.



FEEDBACK

Follow up with PO after critique is received, particularly if they were able to listen to the review.



RESUBMIT

Revise and resubmit if encouraged to do so by the PO; or realign and resubmit as advised by the PO.

EARA Pilot Project - Engagement in Three Waves



Wave 1

18 institutions (6 HBCUs)

Apr 12, 2024 – Sep 20, 2024



Wave 2

15 institutions (3 HBCUs)

Sep 16, 2024 – Mar 14, 2025



Wave 3

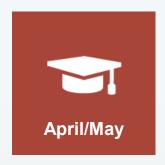
19 institutions (3 HBCUs)

Feb 24, 2025 – Jul 18, 2025

Assigned institutions to waves based on

- Geographic diversity
- Institutional diversity

EARA Pilot Project Components and Timeline – Wave 1



 Call with leadership & faculty of pilot institution



- Match institution with ICO
- Engage IC leadership/Diversity Catalysts/CDOEs



- Email connection between faculty and PO, copying Diversity Catalysts/CDOEs
- Two follow-ups



- Virtual convening
- Final evaluation: outcomes from ICO and wave 1 pilot institution

19 NIH ICs Where Faculty Were Matched in Wave 1 (74 faculty total)

NCCIH

NIBIB

NIGMS

• NCI

NICHD

NIMH

NEI

NIDA

NIMHD

NHLBI

NIDCD

NINDS

NIA

NIDCR

NINR

NIAID

NIDDK

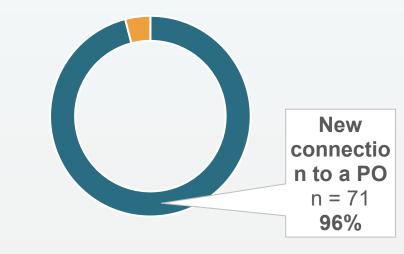
NIAMS

NIEHS

Faculty Connections to Program Officers (POs)

71 out of 74 faculty received a warm hand-off with a PO they had not engaged with before.

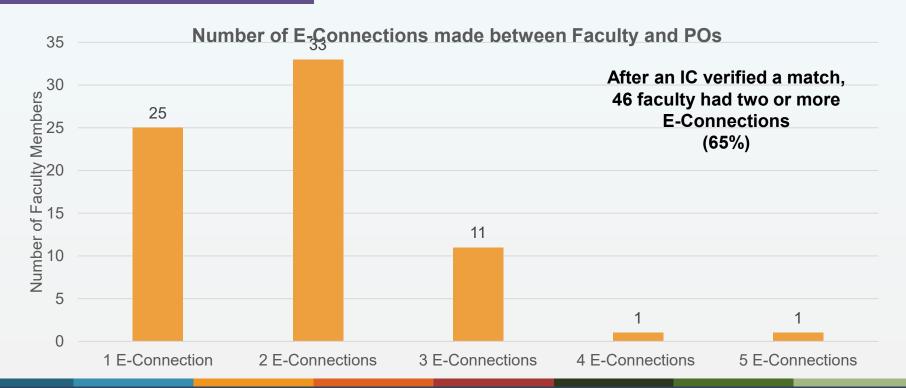




New connection to a PO

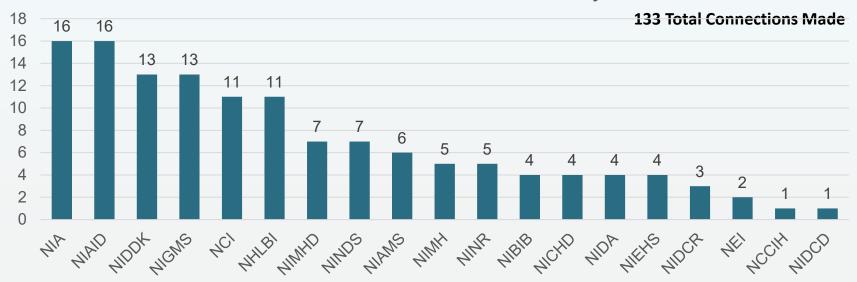
Already established connection with PO

Number of E-Connections Per Faculty



Number of E-Connections Sent by IC

Number of E-Connections Sent by IC



■ Number of E-Connections Sent by IC

Faculty Follow Up Update From 8/6/24 – 17 Wave 1 Faculty Members

"We had a great zoom chat with [PO] last week. She encouraged us to develop an R01 application based on the proposal, gave me really good feedback, and agreed to look at a revised prospectus. She also followed up with links to some relevant programs."

"[PO] and I did meet, and he was very helpful with advice/guidance on how to structure my specific aims page. He has provided helpful information and feedback on overall matters dealing with grant writing and grand submission. Thus, it has been a good match."

"I had meetings with [POs]. All were very warm and supportive discussions, very open to providing resources and asking questions. [PO] was very positive about this proposal and encouraged me to consider PAR-22-164, which is an excellent fit. She also verified the recommended review section and provided a warm connection to a colleague at Mayo Clinic as a potential enrollment site."

"I've had a very positive experience during EARA, which has meant the world given previous encounters and as an ESI. Thank you for the opportunity to be included. I do not have any ways that the program would need to change - this has been excellent and exactly the hand up that can spark change."



CONTACT US

- Sign up for our <u>quarterly newsletter</u> and visit our <u>COSWD blog</u> for twice monthly updates
- in Follow us on LinkedIn @NIH Chief Officer for Scientific Workforce Diversity
- ✓ Email us at EARA@nih.gov



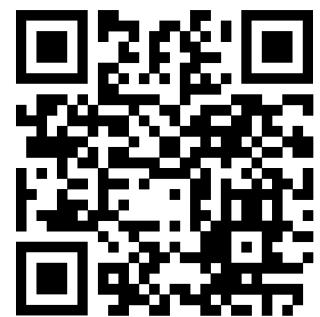


Q&A



Small Group Activity: Capacity Mapping

 To Participate In-Person: Join the table number that matches the number on the back of your nametag To Participate Virtually:



Scan QR Code or Join Zoom breakout rooms using the information below:

Meeting ID: 991 2106 6170

Password: 180776

Small Group Activity: Capacity Mapping

- Part 1: Identifying
 Dimensions of Capacity
- Part 2: Mapping Assets to Research Goals
- Part 3: Group Report-Out

To Participate Virtually:



Scan QR Code or Join Zoom breakout rooms using the information below:

Meeting ID: 991 2106 6170

Password: 180776



Part 1: Identifying Dimensions of Capacity

In each group:

- Discuss different dimensions of capacity related to climate change and health research.
- On sticky notes (physical or virtual), write down what dimensions of capacity are being discussed.
 - On each sticky note, reference which institution type (MSIs, HSIs, HBCUs, etc) the capacity or asset is associated.
- Organize the sticky notes of assets or capacities to create a map.

Sticky Note Example:

Asset or Dimension of Capacity:

Partnerships with local organizations

HBCU

To Participate Virtually:

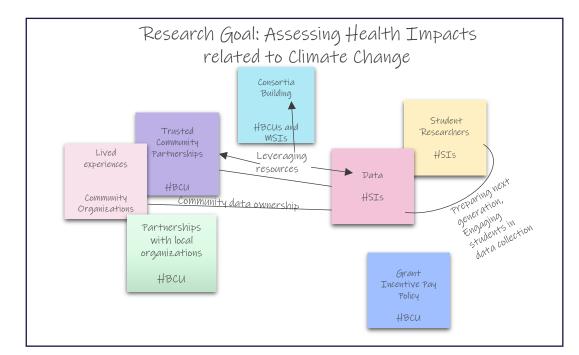
- Scan QR Code or join Zoom breakout rooms using the information below:
- Meeting ID: 991 2106 6170
 Password: 180776





Part 2: Mapping Assets to Research Goals

- Each group will receive a different research goal.
- Using your sticky notes, begin to outline how each aspect of capacity can support specific research activities or initiatives.



To Participate Virtually:

- Scan QR Code or join Zoom breakout rooms using the information below:
- Meeting ID: 991 2106 6170 Password: 180776





Part 3: Report Out

 Each group facilitator will have 2 – 3 minutes to share some key discussion points.





08

Closing Remarks

Committee Co-Chairs



Shamarial Roberson CEO

DSR Public Health Foundation



Berneece HerbertDepartment Chair, Urban and
Regional Planning

Jackson State University

Please Join Us...

Workshop 2

Building Health and Climate Research Capacity in the U.S. Gulf Coast: Elevating Minority-Serving Institutions as Key Partners

Where: New Orleans, Louisiana

When: February 2025

Thank You to Our Sponsor



Robert Wood Johnson Foundation