



National Institute of  
Environmental Health Sciences

# Partnerships for Environmental Public Health Meeting Report

## Climate Change and Environmental Justice: Engaging Diverse Teams

**#PEPH2024**



This report was prepared by Avanti Corporation in collaboration with NIEHS Program Officers



## Table of Contents

Executive Summary.....	2
PEPH Opening Session: Welcome and Charge .....	3
Intergenerational Engagement .....	3
Engaging Communities in Oceans and Human Health.....	4
Sensors, Tools, and Resources.....	4
Translating Research to Protect Children’s Health and Achieve Health Equity in a Changing Climate .....	5
Building Bridges in Environmental Health: Training Early Career Researchers for the pursuit of Environmental Justice .....	6
Building and Sustaining Local Capacities .....	7
Listening Session with the NIEHS Director .....	8
Workshops and Poster session.....	10



## Partnerships for Environmental Public Health Network Meeting Report – Climate Change and Environmental Justice: Engaging Diverse Teams February 20 – 22, 2024

### Executive Summary

The Partnerships for Environmental Public Health (PEPH) network meeting was held on February 20-22, 2024, at the National Institute of Environmental Health Science (NIEHS) campus in Durham, North Carolina. Nearly 200 participants including grantees, NIEHS program officers, and community partners gathered for the first in-person meeting since 2020 to discuss experiences, strategies, and opportunities focused on engaging diverse teams in the context of climate change and environmental justice. The meeting aimed to break down programmatic silos and enable its attendees to interact with, learn from, and connect with those outside of their program or research areas.

To achieve this goal, the planning team organized the three-day event into (1) Workshops (2) panel sessions, (3) poster sessions, and (4) open discussions. The team also arranged a listening session with the NIEHS director to enable participants to ask questions, mention opportunities and challenges, and suggest beneficial systematic changes.

Throughout the meeting, participants shared strategies on engaging diverse community stakeholders, using technology in community projects, strengthening research translation to achieve health equity, training future researchers in environmental justice issues, and building capacity in communities. During panel discussions, attendees discussed research gaps and possible future opportunities.

Key messages and recommendations included:

- It is important to foster relationships with youth who have experienced exposures early on.
- Qualitative metrics and tracking are key to evaluate community engagement program success.
- An RFA that supports community education programs needs to be implemented.
- Community expertise and insights are important when reporting back sensor data.
- Environmental justice funding needs to go to those doing real EJ work.
- Communities need grant writing training in an environment conducive to learning.
- Providing communities with data gives them a voice in the decision-making process.
- Fellowships present opportunities to learn how to communicate science to community groups.
- Strengthen strategies to increase NIEHS-funded projects in parts of the United States that have not often received grant funding.
- Including appropriate community-engaged research expertise strengthens review panels.



- Consider and support approaches for building capacity of community and university partnerships to establish the necessary infrastructure to successfully apply for NIH and NIEHS funding.
- Sharing success stories, such as the OHH initiative and the EHRA program, can help others.

## PEPH Opening Session: Welcome and Charge

Liam O’Fallon, PEPH Program lead, welcomed participants noting that the meeting was aimed to strengthen the PEPH network by supporting existing and new collaborations. To highlight the broad representation of participants, O’Fallon asked people to stand when he called their affiliation such as the Environmental Health Science Centers, Children’s Health Centers, Superfund Research Program, Climate Change and Health, Worker Training Program, students, and community partners. He encouraged participants to meet people outside their program areas and to make time to listen and learn from one another.

In his opening remarks, NIEHS director Rick Woychik reminded the audience how past PEPH meetings have bolstered the success of NIEHS initiatives such as environmental health literacy and reporting back research results. He noted that he looked forward to the planned listening session on the last day, acknowledging how he enjoys engaging in such dialogues.

## Intergenerational Engagement

This session aimed to provide an understanding of effective strategies when working with diverse age groups of community members. Panelists in this session shared their unique perspectives including successes, challenges, capacity building, curriculum development, building interdisciplinary teams and lessons learned on intergenerational environmental health engagement.

Panelists observed that research projects addressing community needs and concerns help increase community participation. Awareness of culture and engaging entire families is essential for successful youth engagement. Youth leaders are also helpful in engaging and connecting with younger generations.

Young people are eager to think about ways to be involved and to act. Panelists recommended that training youth to identify sources of reliable information is

### Take aways from breakout sessions

- Fostering relationships with youth who have experienced exposures early on is important.
- There is a need to teach all generations to be information savvy and critical of messaging to be able to identify credible information and make informed decisions.
- Qualitative metrics and tracking are required to evaluate success of community engagement programs.
- Funding opportunity webinars need to be readily available and an RFA that supports community education programs needs to be implemented.
- Grant funding should allow for purchase of equipment required for creative projects and compensating youth for their time.



essential. Building the capacity of youth increases their awareness as consumers and provides a starting point for conversations. When questioned about the sustainability of youth engagement, panelists commented that it is an ongoing process to identify and sustain long-term impacts. One suggestion was to provide an action project component that the youth can engage in after the program ends. This allows for sustainability and the opportunity to follow participants forward after the program ends.

Panelists agreed that one important lesson they learned while engaging youth is the need for a clear understanding of the civic engagement process. It is important to understand how to move ideas forward while working with the government and advocating for change.

## Engaging Communities in Oceans and Human Health

The session started with an introduction to the field of oceans and human health followed by presentations on a diverse range of community engaged research activities underway in the field through the Centers for Oceans and Human Health and through the Research to Action program. NIEHS and the National Science Foundation have a long history of working together on oceans and human health. Since 2004, they jointly fund research centers focused on water quality and food-borne illnesses related to the environment within coastal oceans, great lakes, and aquatic ecosystems.

Presenters discussed involving community in disaster risk identification and management by giving them access to the data and training students and youth using hand-on activities. Presenters also explained how communities were involved in sampling and monitoring activities. Speakers commented on how successful community engagement resulted in increased funding at the state and federal levels for programs focused on disaster risk reduction and increasing long-term resilience of coastal communities.

Panelists stated the importance of collaboration at all levels in training activities. Researchers worked with teachers to develop educational activities for the classroom and collaborated with community organizations to identify community training needs. They also gathered feedback once training was complete to evaluate successes and identify improvement opportunities.

Panelists also discussed the use of technology in community-based monitoring activities. In Alaska, Tribal partners have been instrumental in generating subsistence monitoring data. Sensors placed in environmental justice communities helped communities to understand the why, what, and how of environmental disasters and helped with implementing early warning systems at the local level.

## Sensors, Tools, and Resources

Experts in sensor technology and resource development shared their experience, learnings, and challenges in the use of sensors in community-based projects. Environmental exposures can be detected



and mitigated with sensor and technology use. Sharing how to use the tools and sensors and how to find shared resources is crucial to empowering residents in communities.

Panelists shared lessons learned from their past and current efforts. They suggested using an agile approach to minimizing risk in a study. In addition, they suggested starting with a small-scale pilot in a

#### Take aways from breakout sessions

- When reporting sensor data to communities, tap into community expertise and take advantage of shared insight generation.
- It is essential to find the right monitor with appropriate sensitivity for the right population and situation.
- It is challenging to create sensors to detect small molecules in real time but incremental improvements in sensor detection are good.

low-risk environment to determine if the study is on the right track. This approach helped them ensure that the right sensors were being used, they were functioning appropriately, they were in the right locations and providing the required data, and that key questions were being answered.

Panelists discussed their work with community partners, shared success stories, and explained the process of creating a sensor tailored to areas of need. Speakers highlighted the importance of fostering community-academic partnerships through

education training and team development. Providing technical training in the application of sensors in communities helped establish a community of practice while regular engagement activities ensured that community needs were being addressed. The speakers emphasized that challenges most often result from misaligned goals and expectations between communities and academic partners. Therefore, engaging communities from the beginning and ensuring that data supports the story that the community wants to tell is important. Simple stories hold the greatest potential for impact.

## Translating Research to Protect Children’s Health and Achieve Health Equity in a Changing Climate

This session informed the PEPH community about the [Collaborative Centers in Children’s Environmental Health Research and Translation \(CEHRT\) program](#). Speakers highlighted examples of projects from the CEHRT centers and discussed ways for the PEPH community to get involved with CEHRT to advance environmental and climate justice and health equity for children.

Panelists described the importance of working with community health workers for outreach particularly in rural communities. Community health workers receive training at the Centers through formal programs. The community health workers also receive mentorship from experienced workers.



Panelists discussed practical issues with their projects including quality control of community owned or community collected data. They recommended carefully documenting data collection processes through photographs and standard operating procedures (SOP). Panelists also suggested working with an academic partner and using their resources for data management.

### Interested in learning more?

Check out the [CCEHRT program page](#) and see how you can contact the individual Centers to learn more about pilot project support.

- [The Center for Children’s Health Assessment, Research Translation, and Combating Environmental Racism \(CHARTER\)](#)
- Children’s Environmental Health Network [Coordinating Center](#)
- [Bridging Research, Lung Health, and the Environment \(BREATHE\)](#)
- [Collaborative Center in Children’s Environmental Health Research and Translation](#)
- [Advancing Science, Practice, Programming, and Policy in Research Translation for Children’s Environmental Health \(Asp3ire\)](#)
- [Philadelphia Regional Center for Children’s Environmental Health](#)
- [Southern California Center for Children’s Environmental Health Translational Research](#)

## Building Bridges in Environmental Health: Training Early Career Researchers for the pursuit of Environmental Justice

This highly interactive panel discussion with fellows from Agents of Change and the JPB Foundation where panelists discussed the opportunities granted by participating in training outside of traditionally funded programs.

Panel members discussed how there is no limit to the number of trainings one should take and discussed the deliverables for the Agents of Change fellowship and how these projects furthered their career and bettered them as people. Through the fellowships, the panelists were able to create connections across disciplines and emphasized that thinking in the mindset of synergy across career levels is extremely important.

Panelists discussed how these fellowship programs provided training they would not have otherwise received, such as how to communicate science in an approachable way and how to do team science. Panelists also shared ways they are mindful of their mental health by understanding their motivations and learning to use the phrase “no, and” which preserves their time and provides valuable opportunities to others.



## Building and Sustaining Local Capacities

Speakers in this session highlighted their work with communities across the country that are overburdened and under-resourced. They shared their experiences, lessons learned, and partnership opportunities related to their projects.

Panelists discussed the goals, achievements, and future planned activities for the following federal investments and public and private initiatives:

- Environmental Justice Thriving Communities Technical Assistance Center Resource for Assistance and Community Training (REACT4EJ) - The technical centers assist in communication and outreach, training, and accessing subject-matter experts. The goal of the center is to build capacity for the local organizations to become sustainable.
- Oceans and Human Health Center on Climate Change Interactions Community Engagement Core and EJ STRONG – The program has formed community partnerships to address public health and economic vitality, and to address quality of life issues. They worked with the Rosemont Community in the City of Charleston to learn, leverage, and lead their community program. This allowed the community to produce data on environmental concerns which then allowed them to leverage the data to get funding for a flood notification system.
- Albuquerque Area Southwest Tribal Epidemiology Center – Indigenous Healthy Homes & Healthy Communities – The program provides public health services in the areas of epidemiology, training, program evaluation, and technical support as well as health promotion and disease prevention/interventions throughout the 27 tribal nations in their service area. Epidemiology centers collaborate with tribes to identify their health needs and make recommendations to improve health care delivery systems.

### Discussion highlights

- Start with what is important to your community partners. Community members may not be aware of, or care about, the connection between climate disasters and health. The EJ Strong pivoted their approach to talk about health implications first, and then focus on climate change.
- RTI is working with community partners to assemble advisory boards and are subcontracting to community organizations to draw on their experiences, connections, and voices in the delivery of the technology assistance.
- Funds dedicated to environmental justice need to go to those doing real EJ work. Justice40, ComPASS, and hub-to-hub programs are good examples of what works well in the EJ space.
- Communities need grant writing training in an environment that makes the process less overwhelming.

The panelists noted how they work with a variety of partners to provide technical assistance to their communities. They enabled communities to identify their needs and provided resources for funding





opportunities, monitoring materials, and structural interventions. Panel members emphasized a shared aim to ensure that academic-led projects are able to transition to community partners and that community organizations are well-positioned to secure long-term sustainability.

## Listening Session with the NIEHS Director

This closing session provided meeting participants with an opportunity to communicate various environmental public health issues and receive immediate feedback from the NIEHS director. The session enabled participants to ask questions, mention opportunities and challenges, and suggest beneficial changes straight to the ear of the director of NIEHS.

The following issues were discussed:

- 1. Redistribution of funding** – participants noted that the disbursement of grants and research centers across the country primarily goes to academic institutions on the coasts. While grants give money for science, there are also costs associated indirect costs associated with science and with the community work. Historically black colleges and universities (HBCUs), tribal community colleges, frontier universities need money to connect and employ community members. The distribution of funds and centers needs to reach all geographical areas. It was recommended that NIEHS develop a program that supports regional Centers.  
The NIEHS director agreed that funding distribution was inequitable and stated that the NIH was actively working to ensure fund distribution covered the entire country. O’Fallon acknowledged that funding typically goes to those institutions that have the infrastructure to properly apply for and manage NIH funds. He reiterated the need to identify applicants from underfunded states or regions and that the NIEHS was open to considering the best strategies to improve the process.
- 2. Restructuring grants** – participants highlighted that indirect costs in research projects are not being shared equally. Overhead costs are a baked-in structure that may contribute to inequity as there is no investment in the overhead cost of the communities. Community organizations need to keep their lights on, too. Shouldn’t some of the indirect costs go to the partnering organizations? During grant decision making NIEHS needs to visualize, identify, prioritize, and micro target underrepresented areas.  
The NIEHS director stated that overhead cost was a necessary element but there was a need to think of creative mechanisms to get funding directly to communities. O’Fallon acknowledged that while community-based organizations can apply for NIH funding, larger institutions have the advantage for the reasons noted above.
- 3. Diversity in grant mechanisms** – To better support and sustain community-engaged research, it was recommended that the NIEHS establish a grant series: capacity building grants, planning grants, research grants, practice grants, and sustainability grants. Researchers need 10 years of



funding to be able build real relationships, create real impact, and sustain change. There is a need to list the action and impact in the criteria in the NOFO as that would ensure proper environmental justice action. It was also requested that NIEHS make the community-based organization a required co-lead of a grant to ensure community involvement.

- 4. Training reviewers** – Participants posited that review panel members are more comfortable assessing and scoring project proposals with a science focus or research approach that they know, which may lead to a bias. As such, it was recommended that reviewers be trained to look for specific community-engaged research issues during study sessions.

The NIEHS director stated that it is imperative that grants are given a fair assessment and agreed that the right people need to be present during study sections. The review process has come a long way from what it used to be and requested researchers to not turn down the opportunity when called to be part of a study section. O’Fallon reminded the audience that researchers can volunteer to be on specific study sections if they are a subject matter expert in the relevant field.

- 5. Community partnership support** – Participants highlighted the value of programs that allow for grant recipients to develop mechanisms for sharing grant dollars and resources to community partners. There are some inconsistencies across the NIEHS-funded programs regarding support for these efforts. It was suggested that, if NIEHS seeks to empower communities and have communities lead the change in their community around NIEHS’ science, there needs to be a way to support this goal. As such, it was recommended that the NIEHS examine all programs, especially Center programs, to make sure they allow for community partnership support. The NIEHS director agreed that partners need to feel like partners and not like research subjects. This was a topic that was readdressed outside of the meeting space.

- 6. Pathways for students coming from two-year institutions** – Participants noted that for most institutions, there is a lack of capacity to work with two-year students, such as from rural, tribal, or community colleges, or two-year colleges. It was recommended that NIEHS attend the National Health and Accreditation Council meeting to learn how to support these pathways, which would greatly diversify and strengthen the environmental health workforce.

The NIEHS director stated NIEHS was going to make the effort to attempt to attend the National Health and Accreditation Council meeting. NIH is invested in getting into historically black colleges and universities and minority serving institutions to help build capacity to provide the infrastructure to write a good grant.

- 7. Thematic programming** – Participants highlighted the value of a whole government approach when creating themed programming, such as the Oceans and Human Health program started by NIEHS, the National Oceanic and Atmospheric Administration, and the National Science Foundation. It was recommended that NIEHS continue to support and advance such thematic programs and communicate the success of them.

The NIEHS director stated the criticalness of creating a platform where people can bring their



needs and ideas and the need to build on the capabilities of other ICs and to continue to build collaborative efforts.

- 8. Data injustice** – Participants cautioned that as NIH incentivizes the use of machine learning, there can be a disservice to the communities if there is not a discussion about the full life cycle of how that data is going to be used and stored in the long term. It was requested that investment come from the NIH on training, education, and capacity building around data sovereignty and data protection rights, specifically addressing it as an infrastructure issue as well as an ethical issue. As indigenous communities are part of the programs that involve data mining but do not have the infrastructure in place to be an equitable partner in that process (such as lack of internet access) it is recommended that NIEHS includes community infrastructure as part of the data sharing management plan to avoid communities becoming victims of data mining. Data justice is an important aspect of environmental justice discussions, but it is not one that is heavily funded or incentivized and it is recommended that NIEHS incorporate data justice in its environmental justice efforts moving forward.

- 9. Natural disasters due to climate change** – Participants noted that during discussions throughout the meeting, when addressing climate change and environmental justice, the focus was on day-to-day experiences and not natural disasters. It was asked, what is being done to address the need to build capacity within communities when it comes to disaster preparedness and emergency preparedness?

The director of NIEHS recommended to check out the [NIH Climate and Health strategy](#). This issue was further addressed outside of the meeting space by the program director of the Worker Training Program.

- 10. NIH leadership in diversity advocacy** – Participants expressed concern that the SCOTUS decision that outlawed affirmative action has negatively impacted those pushing for diversity in the environmental public health and environmental justice fields. It was emphasized that continued leadership from NIH in that space is critical.

The NIEHS director provided assurances that NIH will continue to provide leadership in that space.

## Workshops and Poster session

Multiple workshops sessions were planned by PEPH grantees throughout the meeting. These sessions were aimed at skill building by providing hands-on training in digital tools, in depth discussion about teaching frameworks, PEPH logic and evaluation models, and community engagement tools for a diverse audience. Workshop abstracts can be found on the [meeting website](#).

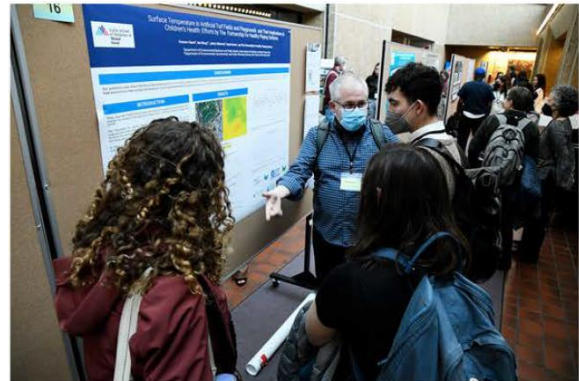
The meeting also hosted two poster sessions for trainees to share their research and outreach experiences, gain direct feedback from experts, and provide a platform for sharing ideas and forming



collaborations. 64 posters covered a range of topics covering climate change and environmental justice. The poster abstracts are available on the [meeting website](#).



Dominic Pak, recipient of the *USC President's Sustainability Initiative Award*, presenting his poster on PFAS ACT.



Homero Harari, ScD, MSc, discussing surface temperatures with Robbie Parks and Isabella Pacenza.



Mya Love-Whitley presenting on chemical, environmental, and socioeconomic influences on obesity.



Aresha Nadeem discussing ways young students can advocate for healthier environments.