

# New Science to Inform Environmental Justice



## WORKSHOP SUMMARY

Atlanta, GA  
October 20–21, 2022



## Table of Contents

Introduction.....	1
About the Health Effects Institute.....	1
Goals of the Workshop.....	2
Workshop Planning.....	2
Workshop Participants .....	2
Workshop Format .....	3
Themes Identified throughout Workshop Sessions.....	7
Valuing Community Expertise and Experience to Advance Environmental Justice .....	7
Considerations for Effectively Addressing Environmental Justice Issues through Research .....	7
Environmental Justice Knowledge and Community Gaps.....	8
Logistical Components of a Successful and Equitable Research Program.....	8
Next Steps .....	9
Attachment 1. Agenda.....	10
Attachment 2. Guiding Questions .....	13
Attachment 3. Workshop Participants.....	15

## Workshop Summary Contributors

### ENVIRONMENTAL JUSTICE WORKSHOP PLANNING COMMITTEE

**Jeffrey R. Brook**, Co-Chair, HEI Research Committee, Associate Professor, University of Toronto

**Ana Navas-Acien**, Co-Chair, Professor, Columbia University

**Christina H. Fuller**, Associate Professor, University of Georgia

**Ana M. Rule**, HEI Research Committee, Assistant Professor, Johns Hopkins University

**Ivan Rusyn**, HEI Research Committee, Professor, Texas A&M University

### HEI STAFF

**Palak Balyan**, Consulting Staff Scientist

**Elise G. Elliott**, Staff Scientist

**Daniel S. Greenbaum**, President

**Yi Lu**, Staff Scientist

**Ellen K. Mantus**, Director of Science

**Robert O'Keefe**, Vice President

**Martha Ondras**, Research Fellow

**Allison P. Patton**, Senior Scientist

**Annemoon M. van Erp**, Deputy Director of Science

**Anna Rosofsky**, Senior Scientist

**Robert Shavers**, Operations Manager

## Introduction

The Health Effects Institute (HEI) is committed to incorporating environmental justice (EJ) into its current research program to better serve communities that experience disproportionate levels of environmental exposures and health effects. To this end, HEI hosted a workshop, “New Science to Inform Environmental Justice,” on October 20–21, 2022, in Atlanta, Georgia. The purpose of the workshop was to engage a broad array of EJ stakeholders in identifying priorities, barriers, and solutions to inform HEI’s future efforts in a space where they could learn from each other and forge new connections. This report provides a brief summary of the discussions at the workshop, which will inform HEI’s next steps.

### About the Health Effects Institute

HEI is a nonprofit corporation that was chartered in 1980 as an independent research organization to provide high-quality, impartial, and relevant science on the effects of air pollution on health.

To accomplish its mission, HEI

- Identifies the highest-priority areas for health effects research.
- Competitively funds and oversees research projects.
- Provides intensive independent review of HEI-supported studies and related research.
- Communicates the results of its research and analyses to public and private decision makers.

HEI typically receives balanced funding from the U.S. Environmental Protection Agency and the worldwide motor vehicle industry. Frequently, other public and private organizations in the United States and around the world also support major projects or research programs. All research is selected, overseen, and reviewed independently of HEI sponsors (Figure 1).

HEI’s independent Board of Directors consists of leaders in science and policy who are committed to fostering the public-private partnership that is central to the organization. HEI’s Research Committee consists of researchers in the environmental health sciences who work with scientific staff to develop a 5-year strategic plan, select research projects for funding, and oversee their conduct. HEI’s Review Committee, which has no role in selecting or overseeing studies, works with staff to evaluate and interpret the results of funded studies and related research.

HEI has funded more than 340 research projects in North America, Europe, Asia, Africa, and Latin America, the results of which have informed decisions regarding carbon monoxide, air toxics, nitrogen oxides, diesel exhaust, ozone, particulate matter, and other pollutants. All project results and accompanying comments by the Review Committee are widely disseminated free of charge through HEI’s [website](#), reports, newsletters and other publications, annual conferences, and presentations to legislative bodies and public agencies.

### Why Focus on Environmental Justice at HEI?

- There is a need to incorporate new and community-driven research approaches to address the environmental health challenges faced by historically marginalized communities.
- As an environmental health funding organization, HEI is uniquely positioned to contribute to the environmental justice space.
- HEI can serve as a convener of multisectoral stakeholders and provide a flexible funding model that incorporates environmental justice principles.



**Figure 1. How HEI Works to Provide Impartial Science for Decision Making and Public Understanding.**

## Goals of the Workshop

HEI has a long history of funding successful studies on the health effects of air pollution exposures and seeks to identify possible ways of applying this expertise to contribute to EJ research. Accordingly, the goals of this workshop were to identify knowledge gaps and barriers to conducting effective EJ research, explore components of successful community-academic partnerships, and provide a venue for HEI and stakeholders in the EJ field to develop and strengthen connections.

## Workshop Planning

The workshop planning committee included Jeff Brook (workshop Co-Chair, HEI Research Committee, Associate Professor, University of Toronto), Ana Navas-Acien (workshop Co-Chair, Professor, Columbia University), Christina Fuller (Associate Professor, University of Georgia), Ana Rule (HEI Research Committee, Assistant Professor, Johns Hopkins University), and Ivan Rusyn (HEI Research Committee, Professor, Texas A&M University). HEI staff conducted informational interviews with people working in academia and government who had recently hosted EJ-focused workshops and those who have expertise in working with communities disproportionately exposed to air pollution and climate change effects. Recurring recommendations for the workshop included ensuring that participants represent multiple sectors and incorporating small group listening sessions. Based on those recommendations, HEI organized an in-person, invitation-only workshop to create a welcoming environment for active discussions.

## Workshop Participants

Workshop participants included people actively working on air pollution and climate justice issues from academic institutions, community organizations, non-profit organizations, government institutions, and HEI sponsors. HEI invited participants from across the contiguous United States. Because EJ concerns can be place-based, the planning committee sought to balance the number of participants from different regions of the United States. Within regions, HEI invited participants from different sectors to provide opportunities to strengthen existing partnerships and create new connections with others working in the same region. The workshop was attended by 57 participants (Table 1).

<b>Table 1. Number of Participants from each Sector Represented at the HEI Environmental Justice Workshop, October 20-21, 2022.</b>	
Sector	Number
Academic institutions	19
Community organizations	16
Federal government <sup>1</sup>	4
Industry <sup>1</sup>	1
Non-governmental organizations	3
HEI Research Committee and workshop planning committee	6
HEI staff	8
<b>Total</b>	<b>57</b>

Note: some participants represent more than one sector.  
<sup>1</sup>Includes HEI sponsors.

## Workshop Format

The 2-day workshop provided a setting for participants to identify priorities, barriers, and solutions for advancing EJ through several different formats: keynote presentations, a panel discussion, showcases of successful community-academic partnerships, and small-group breakout session discussions. Both days of the workshop began with presentations in the morning, followed by a series of discussions.

### Keynotes Introducing Environmental Justice and Community-Academic Partnerships

Day 1 of the workshop included keynote presentations from Na'Taki Osborne Jelks, Assistant Professor, Spelman College, and Mychal Johnson, Co-Founder, South Bronx Unite. The keynote presentations set the stage for the workshop through both academic and community perspectives.

Dr. Na'Taki Osborne Jelks provided a history of the EJ movement in the United States, focusing on Atlanta, Georgia. She described how the EJ movement has helped to elevate the concept of cumulative impacts and how race matters when discussing disproportionate effects of environmental contaminants. She provided examples of various community EJ solutions, including grassroots organizing, community-based participatory research, legislative initiatives, direct action, and development of partnerships. As part of these solutions, she emphasized that EJ research partnerships are successful when communities are empowered to effect change.

Mr. Mychal Johnson laid the foundation for discussions about community-academic partnerships to address environmental injustices. After an unsuccessful attempt to prevent a new warehousing facility from being placed in his community in South Bronx, New York, he initiated a partnership between his organization, South Bronx Unite, and researchers at the Columbia University Mailman School of Public Health to collect air pollution measurements before and after construction of the facility. He explained that the combination of advocacy and research enabled the community to build necessary support from state and federal officials to act against polluters in the community.

### Table 2. Workshop Format.

Day 1	Day 2
Presentations: <i>Keynote</i>	Presentations: <i>Case studies</i>
Breakout discussion: <i>Sector-focused</i>	Breakout discussion: <i>Research barriers</i>
Panel discussion	Breakout discussion: <i>Research solutions</i>
Breakout discussion: <i>Topic-focused</i>	

and spur legislative passage of the state Cumulative Impacts Bill to protect public health. He described facets that made this community–academic partnership effective: the community group initiated the relationship; the community group developed the research questions while the researchers provided tools to answer those questions; the relationship between the community and researchers is sustained beyond its work to answer the initial research question; and South Bronx Unite and researchers worked together to educate the community about local environmental health issues.

### Panel Discussion on Research Barriers

In this panel discussion, panelists shared their perspectives on research barriers that they have encountered and strategies used to overcome them. Panelists were selected because of their policy-oriented work and expertise in community–academic partnered research. Members of the panel included:

- Christina Fuller, Associate Professor, University of Georgia, and member of the workshop planning committee (moderator)
- Rachel Morello-Frosch, Professor, University of California, Berkeley
- Yoshira Ornelas Van Horne, Assistant Professor, Columbia University
- Regan Patterson, Assistant Professor, University of California, Los Angeles
- Sherri White-Williamson, Environmental Justice Policy Director, North Carolina Conservation Network



Panel discussion moderated by Christina Fuller (far left) and featuring (from left to right) Regan Patterson, Yoshira Ornelas Van Horne, Rachel Morello-Frosch, and Sherri White-Williamson.

The panel discussion focused on components of effective and successful EJ research, including approaches to form ethical and equitable partnerships and models for data ownership, sharing, and management among research partners. The panel also discussed the financial resources and funding mechanisms needed to support communities and institutions addressing EJ issues.

### Showcases: Successful Community–Academic Partnerships

Day 2 of the workshop included presentations from three successful community–academic partnerships in Texas, Georgia, and California. The presenters described environmental health concerns specific to each community, how the partnerships were formed, the projects on which they have worked together and areas they continue to pursue, the resources and tools developed collaboratively to support community environmental health concerns, aspects of the partnerships that made them successful, and lessons learned.

- **“A Path to Solutions — Forming Community and Academic Partnerships for Environmental Justice.”** Nalleli Hidalgo, Community Outreach and Education Liaison, Texas Environmental Justice Advocacy Services (T.E.J.A.S.) and Garrett Sansom, Assistant Professor, Texas A&M University

Environmental issues of concern in the Houston area include air and water releases from industrial facilities and waste management sites, as well as flooding and uncontrolled air pollutant releases during natural disasters. Ms. Hidalgo opened the presentation by

introducing Texas Environmental Justice Advocacy Services (T.E.J.A.S.), an environmental health advocacy organization. She described how T.E.J.A.S.'s work with environmental health researchers had historically involved data collection without report back and meaningful community collaborations, but that the long-term partnership between T.E.J.A.S. and Dr. Sansom has been based on the common goal of addressing environmental health concerns of the community. Together, Dr. Sansom and T.E.J.A.S. worked with graduate students, high school students, faculty members, and community members to develop a series of environmental health research questions and scientific approaches to address them. Dr. Sansom underscored the importance of humility and continued learning in working with community groups. The presenters explained that the partnership has remained sustainable because Dr. Sansom has volunteered outside of his research to provide educational and training opportunities for community members in partnership with T.E.J.A.S. They both described how citizen science programs and training opportunities have been beneficial for their partnership and the community, including mobilizing community members for citizen science to address pressing environmental health concerns.

- “**The HERCULES Road Show — Exposomics.**” *Lynne Young, Pathways to Sustainability and Melanie Pearson, Director, Community Engagement Core, Emory University*  
The Human Exposome Research Center: Understanding Lifetime ExposureS (HERCULES) at Emory University focuses on developing new tools and technologies to study the exposome.<sup>1</sup> Ms. Young, a member of the HERCULES Stakeholder Advisory Board, has played a central role in guiding the work of the research center and conception of the Exposome Roadshow, a series of workshops meant to educate community members in the Atlanta area about the exposome concept and identify community environmental health priorities. Ms. Young and Dr. Pearson provided examples of two community-engaged research projects: “Mold” and “Air Pollution” studies. The study on mold aimed to assess the effect of flooding on community health. Although the researchers did not find conclusive links between flooding, mold, and high community asthma rates, the study process provided opportunities for residents to learn about indoor mold. The data generated from the study allowed the research center to obtain additional funding to address community health concerns, prompted the city to provide funding to mitigate water leaks, and allowed for relocation of residents to noncontaminated homes. In the study on outdoor air pollution, academic partners and residents collected air samples and shared the results with the larger community, city councilors, and state agencies, which led to the city revising zoning rules to protect public health. Ms. Young and Dr. Pearson concluded by sharing several successful elements of their work, including that it was community driven and involved community experts, that researchers engaged community members early in the process, that it involved a flexible research design, that the team had a plan for handling communication of results that were unexpected or might suggest little need for action, and that funds were equitably

---

<sup>1</sup> The exposome is defined as the totality of exposures individuals experience over their lives and how those exposures affect health (DeBord et al. 2016).

Reference: DeBord DG, Carreón T, Lentz TJ, Middendorf PJ, Hoover MD, Schulte PA. 2016. Use of the “exposome” in the practice of epidemiology: A primer on -omic technologies. Am J Epidemiol 184:302–314; doi:[10.1093/aje/kwv325](https://doi.org/10.1093/aje/kwv325).

distributed. They also described some challenges, including competing timelines, addressing research fatigue, and navigating university and funding agency bureaucracies.

- **“Tainted Grapes, Tainted Lungs: Lessons on Inclusive Wildfire Disaster and Climate Adaptation Planning for Undocumented Latino and Indigenous Migrants.”** *Genevieve Flores-Haro, Associate Director, Mixteco/Indígena Community Organizing Project (MICOP) and Michael Méndez, Assistant Professor, University of California, Irvine*  
California wildfires have disproportionate effects on Indigenous immigrant populations. Ms. Flores-Haro and Dr. Méndez described the cumulative challenges that these communities face: many do not have a written language, they are employed seasonally, and many are undocumented and paid low wages. These inequalities are exacerbated during natural disasters, such as wildfires. The presenters described their joint efforts to develop inclusive disaster planning policies and to develop policy briefs aimed at bolstering disaster relief efforts for their communities. It involved working with Indigenous communities to understand their lived experiences and bolstering Latinx and Indigenous organizational capacity in disaster relief and planning efforts.

### **Breakout Sessions to Discuss Priorities and Identify Solutions to Advance Environmental Justice**

The workshop involved four breakout sessions over the span of 2 days, with 18–20 participants in each of three breakout rooms. The breakout sessions were designed to facilitate open, dynamic discussion by individuals with different perspectives on topics related to the workshop goals. The planning committee members and Heather Holmes (HEI Research Committee, Associate Professor, University of Utah) served as discussion facilitators.

- **Breakout Session 1: “Identifying EJ Priorities and Concerns: A View from Various Sectors”**  
In this opening breakout session on Day 1, participants were assigned to separate rooms based primarily on their sector: academic, community-based, or policy-focused. The aim of this format was to provide a shared, comfortable space for groups within the same sector to connect and share experiences, successes, and lessons learned.
- **Breakout Session 2: “Identifying EJ Priorities by Research Topic”**  
In the second breakout session on Day 1, each sector was represented in each group to the extent feasible. In each room, participants worked to identify priorities within one of three topics: air pollution, climate change, and community science and capacity building.
- **Breakout Sessions 3 and 4: “Identifying Solutions and Promoting Future Collaborations”**  
In the breakout sessions that took place on Day 2, groups remained the same between the two sessions and each sector was represented in each group to the extent feasible. Groups discussed topics for future EJ research and opportunities for collaboration in the third breakout session. In the final breakout session, groups discussed solutions for challenges encountered in conducting research and in forming sustainable partnerships.

## Themes Identified throughout Workshop Sessions

The participants discussed a wide range of EJ-related topics. This section summarizes major themes that emerged from the presentations, panel discussion, and breakout sessions. The themes are intended to provide a summary of the meeting discussions and do not necessarily reflect the consensus of the group or the views of HEI or any individual workshop participant.

### Valuing Community Expertise and Experience to Advance Environmental Justice

Participants noted that community members possess important local and historical knowledge, expertise, and professional skills (e.g., from careers as data scientists, graphic designers, and healthcare workers) that must be consulted and considered in efforts to address environmental health problems. Youth also have cultural competency and can sustain community action that can be enhanced through community-academic pipelines and partnerships. Many traditional research and problem-solving models to address environmental injustices have prioritized academic expertise over that of the community, which has often led to ineffective and unsustainable solutions.

At the same time, academics can play a key role in advancing EJ by providing technical tools to answer scientific questions and build community capacity and assistance to help community organizations compete for grants and manage budgets. Other stakeholders (such as policymakers, regulators, and lawyers) play important roles in translating data, educating their colleagues and community members about EJ concerns, making research findings actionable, and eliminating barriers to building community capacity.

### Considerations for Effectively Addressing Environmental Justice Issues through Research

Participants discussed several considerations in developing a research program that effectively addresses EJ issues. A research program should be problem-focused and solution-oriented to provide data that addresses community needs, rather than focus on further descriptive analyses of existing exposure disparities. Successful EJ research provides readily accessible data for communities with training opportunities on how and whether the data can be used for decision making. It should involve joint decision making by community-academic partnerships. Ideally, the partnerships last beyond the individual questions that the project aimed to address in order to sustain any benefits obtained from the original research project. Partnerships can be strengthened through co-learning opportunities, by prioritizing community concerns, and by engaging other stakeholders to support the work of the partnership. Participants underscored that establishing mutual trust and effective working relationships within community-academic partnerships takes time and dedication.

In creating research programs to answer community-driven questions, one size does not fit all. In other words, research questions differ among communities; results may not be generalizable to other communities; and the local policy, legislative environment, and mechanisms for compensating community members for their time can differ. Other context-dependent considerations include the digital divide (i.e., a community's access to online tools or resources), the local languages, and the community characteristics (e.g., urban or rural). Several participants mentioned the need for nationwide EJ coalitions to identify approaches for successfully addressing EJ issues that may be generalizable and to build, strengthen, and mobilize nationwide capacity to conduct EJ work.

Participants also described challenges that they have experienced that should be considered in an EJ research program. They mentioned that there is a tension between addressing urgent community-based questions and the lengthy scientific research process, that communities often hold the burden of proof in addressing EJ concerns, that logistical barriers often arise in conducting the research, and that the science can be exploitative. Academic participants pointed out that university systems are not structured to incentivize or reward community-based research, thus hindering their ability to forge and maintain sustainable partnerships.

## Environmental Justice Knowledge and Community Gaps

Participants discussed the EJ knowledge gaps or topics that could be prioritized in a new research program:

- Inequitable environmental health policy enforcement and regulation that lead to environmental health disparities.
- Holistic or cumulative impact assessments that consider environmental, social, and economic factors as drivers of environmental health disparities.
- Air quality data collection using federal reference methods at temporal and spatial scales relevant for assessing local EJ issues and for use in accountability studies.
- Data on population groups not captured in census data (e.g., Indigenous migrants).
- EJ implications of major warehouse developments and the implications of energy transitions on EJ communities.
- The intersection of EJ and climate change.

## Logistical Components of a Successful and Equitable Research Program

Participants discussed the logistical components needed for a new research program to be successful and equitable. A prominent point was the need for community members to drive the research question and problem formulation and for academic researchers to provide technical expertise and support. Participants also highlighted the need for technical assistance and staff capacity to help compete for grants and further their organizations' missions.

They suggested mechanisms or approaches to restructure the traditional grant model:

- A staged research process to (1) establish new partnerships, strengthen existing partnerships, and build coalitions to formulate the problem; (2) conduct the research; and (3) allow for a longer "life cycle" of the research project to ensure continuity of engagement.
- Equitable funding mechanisms between academic institutions and community partners, considering that some community groups would want to control their own funding whereas others might not have the desire or capacity to manage research dollars.
- An expanded list of allowable items that are eligible for funding to lower barriers to participation (e.g., food for community events and childcare support).
- Grant application and management processes that are understandable and accessible to multiple stakeholder groups and that minimize administrative burden.
- Research program development and review by a group that represents a variety of stakeholders.

Participants discussed ideal components of a research solicitation, application, and plan. The solicitation should lay out EJ principles and encourage the use of mixed methods and

multidisciplinary expertise (e.g., social scientists, environmental scientists, exposure scientists, and community engagement experts). Applicants should demonstrate tangible evidence of a community-academic partnership and a statement of cultural competency. The research should require memorandums of understanding between community groups and institutions. The applicants should propose the bi-directional training opportunities that they plan to implement to prepare to conduct the work; an accountability plan that describes how the applicants will track successes, failures, and progress; and plans for research dissemination.

Participants raised several considerations in planning successful data management and communication plans. Both the community groups and academic researchers should be involved in developing data ownership agreements and data dissemination plans. These plans should describe steps for translating, reporting, and sharing data, which should be shared responsibilities for community and academic partners. Finally, plans for developing tools need to consider how these tools will be useful for both the research and community needs and prevent them from being used to unfairly characterize conditions in the community.

Participants also provided guidance for HEI's efforts in establishing a new EJ research program. They encouraged HEI to adhere to policies consistent with EJ principles, compensate community members appropriately, and limit knowledge extraction. They recommended establishing an advisory group comprised of multisectoral stakeholders to oversee the program's work. They also asked that HEI communicate clearly and often with workshop participants and others.

## Next Steps

HEI is extremely appreciative of the knowledge, stories, and lessons shared at this workshop. HEI is committed to using and sharing the information gathered at the workshop to guide its efforts as it seeks to find how it can best contribute to and advance science in support of EJ. Immediate next steps include establishing a communications plan for HEI to provide tools and mechanisms for two-way engagement and collaboration with community members and keeping our new and growing network abreast of HEI's progress. HEI will be consulting, both internally and externally, about how it can constructively contribute to the EJ space.

## Attachments

1. Agenda
2. Guiding Questions
3. List of Participants

---

Questions or suggestions? Email Dr. Anna Rosofsky at [arosofsky@healtheffects.org](mailto:arosofsky@healtheffects.org) or contact us at [info@healtheffects.org](mailto:info@healtheffects.org).

Want to stay up to date on HEI? Follow us on [Twitter](#) or [LinkedIn](#) for updates. You can also sign up for our newsletter at [www.healtheffects.org](http://www.healtheffects.org).

## Attachment 1. Agenda

### Health Effects Institute Workshop | October 20–21, 2022

#### New Science to Inform Environmental Justice

Sheraton Atlanta Hotel, 165 Courtland Street NE, Atlanta, GA

#### Thursday, October 20

7:00                   **Registration desk opens (provided)**

7:30                   **Breakfast (provided)**

9:00 – 9:30 a.m.     **Welcome and Opening Remarks**

9:00       Welcome and Opening of the Workshop

*Daniel Greenbaum*

9:15       Workshop Ground Rules

*Jeff Brook, Ana Navas-Acien*

9:30 – 10:45 a.m.   **Keynote Session**

*Moderator: Ana Navas-Acien*

9:30       Introduction

*Ana Navas-Acien*

9:35       Environmental Justice: past, present, and future

*Na'Taki Osborne Jelks, Spelman College*

10:10      How can EJ research empower the community?

*Mychal Johnson, South Bronx Unite*

10:45 – 11:00 a.m.   **Break**

11:00 a.m. – 12:30 p.m. **Breakout Session 1: “Identifying EJ Priorities and Concerns: A View from Various Sectors”**

Attendees from different sectors will identify gaps in knowledge or capacity that have not been addressed by previous EJ research efforts.

Room 1   EJ Community organizations and advocacy groups

*Facilitator: Christina Fuller*

Room 2   Policymakers

*Facilitator: Heather Holmes*

Room 3   Academics

*Facilitator: Ivan Rusyn*

12:30 – 1:45 pm     **Lunch**

1:45 – 2:15 pm     **Discussion Recap**

2:15 – 3:15 pm

**Panel Discussion – “What are barriers to and opportunities for conducting effective EJ research?”***Moderator: Christina Fuller*

In this discussion, panelists will share their perspectives on research barriers they have encountered and strategies used to overcome them. The panel, along with attendees, will explore approaches for more effective EJ research in the future.

*Panelists:**Rachel Morello-Frosch, University of California, Berkeley**Yoshira Ornelas Van Horne, Columbia University**Regan Patterson, University of California Los Angeles**Sherri White-Williamson, NC Conservation Network*

3:15 – 3:30 pm

**Break**

3:30 – 4:30 pm

**Breakout Session 2 – “Identifying EJ Priorities by Research Topic”**

Attendees from different sectors will come together to discuss shared interests. We aim to collect diverse perspectives on the remaining gaps in addressing this issue and common barriers to forming successful cross-sector collaborations.

Room 1 Air pollution

*Facilitator: Ana Navas-Acien*

Room 2 Climate Impacts

*Facilitator: Jeff Brook*

Room 3 Community science and capacity building

*Facilitator: Ana Rule*

4:30 – 5:00 pm

**Discussion Recap**

5:00 – 6:00 pm

**Networking Session**

6:30 pm

**Workshop Dinner****Friday, October 21**

7:30

**Breakfast (provided)**

9:00 – 9:15 a.m.

**Summary of Day 1 & Goals for Day 2***Chairs: Ana Navas-Acien, Jeff Brook*

9:15 – 10:30 a.m.

**Case Studies***Moderator: Jeff Brook*

Successful research–community partnerships formed during environmental justice research have led to positive changes. This session will invite leaders of these projects to share their journey along with what they have learned.

- 9:15      Introduction  
*Jeff Brook*
- 9:20      Showcase 1: *Nalleli Hidalgo, Texas Environmental Justice Advocacy Services (T.E.J.A.S) and Garrett Sansom, Texas A&M University*
- 9:40      Showcase 2: *Lynne Young, Pathways to Sustainability and Melanie Pearson, Emory University*
- 10:00     Showcase 3: *Genevieve Flores-Haro, Mixteco Indígena Community Organizing Project and Michael Mendez, University of California, Irvine*
- 10:20     Discussion

10:30 – 10:45 a.m.      **Break**

10:45 – 11:45 a.m.      **Breakout Session Round 1 - “Identifying Solutions and Promote Future Collaborations”**

Participants will be invited to three breakout rooms to discuss promising EJ research directions, successful initiatives, and potential solutions for shared challenges. The first round of discussion will focus on identifying future EJ research topics and potential collaborations, while the second round will be discussing potential solutions for challenges encountered in study logistics and forming sustainable partnerships.

Room 1 *Facilitator: Ana Rule*

Room 2 *Facilitator: Heather Holmes*

Room 3 *Facilitator: Ivan Rusyn*

11:45 a.m. – 12:15 pm **Discussion Recap**

12:15 – 1:15 pm      **Lunch Break**

1:15 – 2:15 pm      **Breakout Session Round 2 - “Identifying Solutions and Promoting Future Collaborations”**

Room 1 *Facilitator: Ana Navas-Acien*

Room 2 *Facilitator: Jeff Brook*

Room 3 *Facilitator: Christina Fuller*

2:15 – 2:45 pm      **Discussion Recap**

2:45 – 3:00 pm      **Closing Remarks**

## Attachment 2. Guiding Questions

Thursday, October 20

### Breakout Session 1: "Identifying EJ Priorities and Concerns: A View from Various Sectors"

1. How do you define effective and successful EJ research? a. What are the outcomes you want to see from EJ research?
2. What would be more impactful in effecting change: a holistic approach to EJ research, or addressing specific factors individually (e.g., social, economic, environmental)?
3. What are your priorities (ultimate goal) for EJ research or projects?
4. How do your priorities conflict or align with others from similar or different groups? a. Have you had to balance your priorities with others and how did that process work?
5. What role do you think policymakers, community organizations, and academic researchers can or should play in advancing EJ in environmental health? a. What can a research funding organization do to support these roles?
6. What are the benefits and drawbacks of collaborating with partners from other stakeholder groups, including citizens among the general public, when doing your own research?
  - a. How do you like to engage with other stakeholders?
  - b. What do you see as an ideal collaboration?
  - c. How can expectations be managed when concerned citizens/stakeholders/activists are actively engaged in the work?

### Breakout Session 2: "Identifying EJ Priorities by Research Topic"

1. What are some urgent and important EJ issues or needs specific to the "breakout topic"?
  - a. What are some specific EJ issues or needs in your regions or communities?
  - b. What is the role or value of citizen science in research?
2. What are the future directions of EJ research specific to the "breakout topic"?
  - a. Solution-oriented (e.g., accountability study, interventions) or descriptive research?
  - b. Development of method or policy tools?
  - c. What are realistic timelines for tangible progress, and can research be organized such that near-term benefits are achieved from the perspective of multiple stakeholders and funders?
3. What are some components of EJ research that can increase the success and reduce possible harms?
4. What are some existing funding barriers for research under this specific topic?
  - a. What would be some ideal funding models for future EJ research on these topics? Have you seen some real-world examples?
  - b. Are there funding opportunities available to promote transdisciplinary research?

### Panel Discussion: "What Are Barriers to and Opportunities for Conducting Effective EJ Research?"

Moderator: Christina Fuller

*Topic 1: Components of effective and successful EJ research. Consider the challenges that these approaches are meant to overcome.*

1. How do you form ethical and equitable partnerships between and among academic researchers and community organizations?
2. What successful models exist for data ownership, sharing, and management?
3. How do you measure or define success?

4. How do you maintain a balanced power dynamic over time so that research can progress?  
*(Time permitting.)*

*Topic 2: Financial resources needed to support communities and institutions addressing EJ issues.*

1. What level of funding, duration, and delivery would be most supportive of EJ work?
2. How can we develop flexibility in funding mechanisms that can adjust to community priorities?
3. Describe a funding stream that would support new topics and approaches.

## **Friday, October 21**

### **Breakout Session, Round 1: “Identifying Solutions and Promoting Future Collaborations”**

*Topic Round 1: Identifying future EJ research topics and potential collaborations.*

1. What promising ideas or initiatives have you seen for EJ research?
2. What's your plan and vision for your team or organization in the next few years?
  - a. How did you define your vision and identify your strategies?
  - b. What type of skills or collaborations do you need to facilitate your goal or plan?
  - c. What challenges to your EJ work do you foresee in the future, and how can we prepare for them?

### **Breakout Session, Round 2: “Identifying Solutions and Promoting Future Collaborations”**

*Topic Round 2: Potential solutions for challenges encountered in study logistics and forming sustainable partnerships.*

1. What would be some suggestions you have for funding agencies for future EJ fundings?
2. What are some important lessons that you have learned over the years working on EJ that you would like to share with others?
3. Can you provide some examples of the partnerships you know that worked well, why they worked well, and why partnerships are important?
  - a. What do you see as an ideal collaboration, and how do you like to engage with others?

### Attachment 3. Workshop Participants

Name	Affiliation
Gary Adamkiewicz	Harvard University
David Balshaw	National Institute of Environmental Health Sciences
Paloma Beamer	University of Arizona
Roseann Bongiovanni	GreenRoots
Jeff Brook	University of Toronto
Shashawnda Campbell	South Baltimore Community Land Trust
Simone Charles	University of Michigan
MyDzung Chu	Tufts University
Mary Clerkin Allard	Cummins
BJ Cummings	University of Washington
Lan Doan	New York University
Jaeydah Edwards	Groundwork Ohio River Valley
Elise Elliott	Health Effects Institute
Juan Flores	Air Alliance Houston
Genevieve Flores-Haro*	Mixteco Indígena Community Organizing Project
Christina Fuller	University of Georgia
Margaret Gordon	West Oakland Environmental Indicators Project
Daniel Greenbaum	Health Effects Institute
Maria Harris	Environmental Defense Fund
Nalleli Hidalgo*	Texas Environmental Justice Advocacy Services
Heather Holmes	University of Utah
Bryan Hubbell	U.S. Environmental Protection Agency
Cesunica Ivey	University of California, Berkeley
Na'Taki Osborne Jelks*	Spelman College
Mychal Johnson*	South Bronx Unite
Jill Johnston	University of Southern California
Miranda Jones	Johns Hopkins University
Carla Lewis	Environmental Community Action
Paulina Lopez	Duwamish River Community Coalition
Beto Lugo Martinez	CleanAirNow
Ellen Mantus	Health Effects Institute
Michael Méndez*	University of California, Irvine
Rachel Morello-Frosch*	University of California, Berkeley
Ana Navas-Acien	Columbia University
Bob O'Keefe	Health Effects Institute
Hector Olvera-Alvarez	Oregon Health & Science University
Martha Ondras	Health Effects Institute
Yoshira Ornelas Van Horne*	Columbia University
Regan F. Patterson*	University of California, Los Angeles

Name	Affiliation
Allison Patton	Health Effects Institute
Melanie Pearson*	Emory University
Ellin Reisner	Somerville Transportation Equity Partnership
Jennifer Richmond-Bryant	North Carolina State University
Louie Rivers	North Carolina State University
Anna Rosofsky	Health Effects Institute
Ana Rule	Johns Hopkins University
Ivan Rusyn	Texas A&M University
Garett Sansom*	Texas A&M University
Madeleine Scammell	Boston University
Angie Shatas	U.S. Environmental Protection Agency
Robert Shavers	Health Effects Institute
P. Grace Tee Lewis	Environmental Defense Fund
Paula Torrado Plazas	Physicians for Social Responsibility
Jamie Valdez	Mothers Out Front
Sherri White-Williamson*	NC Conservation Network
Daisha Williams	CleanAIRE NC
Lynne Young*	Pathways to Sustainability

\*Workshop panelist or speaker